THE VISUALLY IMPAIRED CHILD

GROWTH, LEARNING, DEVELOPMENT

INFANCY TO SCHOOL AGE

CAROL HALLIDAY

INSTRUCTIONAL MATERIALS REFERENCE CENTER FOR VISUALLY HANDICAPPED CHILDREN

MEMBER SPECIAL EDUCATION IMC/RMC NETWORK

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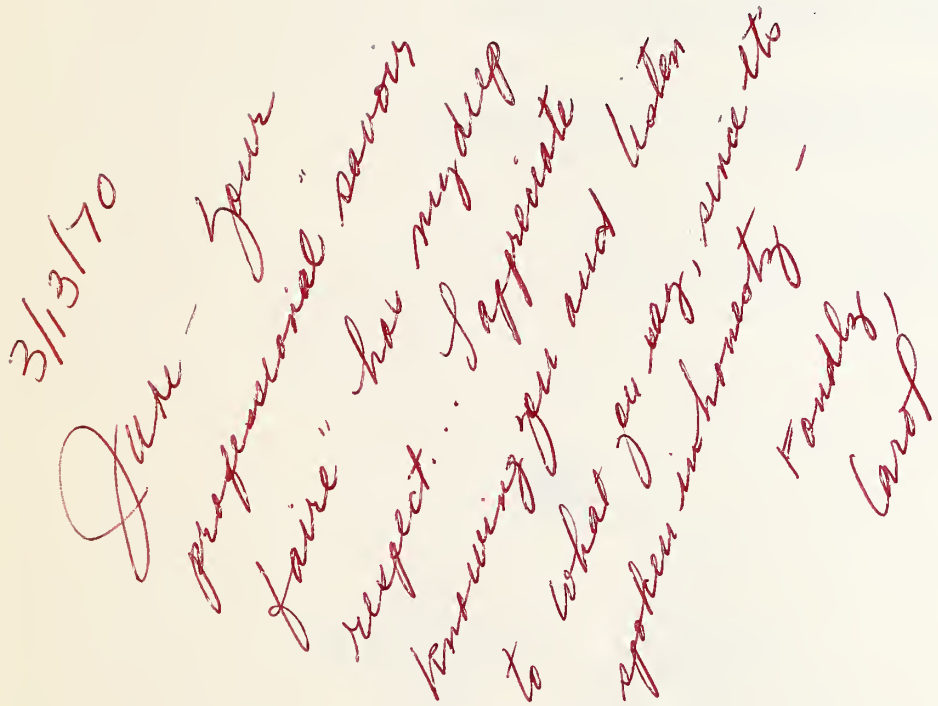

By

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"OF GREAT IMPORTANCE TO THE CHILD'S LEARNING IS HIS RELATIONSHIP WITH A CARING ADULT AND THE AMOUNT OF TIME AND INTEREST THEY SHARE!"

p. 51

PREFACE

This booklet is made available by the Instructional Materials Reference Center (IMRC) of the American Printing House for the Blind as a service to teachers, other professional workers and parents of visually impaired children of pre-school age. It is meant to be of practical value with regard to the care, training and instruction of the child from birth until entry into a formal school program.

The approach in writing the booklet has been eclectic in that an attempt has been made to bring together and integrate the current thinking of leaders in the fields of child development and visual impairment. In this latter field the author relied heavily on the writings of Fraiberg and her colleagues (1964, 1968, 1969), Norris, Spaulding, and Brodie (1957), Lowenfeld (1964), and Barraga (1964) and to a lesser extent on Kurzhals (1966, 1968 a&b), Maxfield and Buchholz (1957) and Murray (1965, undated). In the former field the author is indebted to Gesell and his colleagues (1940, 1965), Maier (1965) and Watson and Lowrey (1962). The Kirk, Karnes, and Kirk (1968) publication was also most helpful. The interested reader is urged to pursue the ideas of these leaders in their original works.

In addressing itself to the general consideration of children not yet enrolled in school, the study gives its emphasis to behavior and achievement, avoiding arbitrary approaches based on chronological age. Information is organized according to sequences of developmental stages common to children generally. These sequences can be experienced by the young visually impaired child, too, although the age levels at which they may occur may vary greatly. The development of both sighted and visually impaired children, however, is dependent on certain helps being given at the appropriate times.

The need for this booklet is apparent to those who work with the impaired pre-school child. Until recently, little attention has been given to the learning processes during early childhood at which time the care of children, under average conditions, is conducted chiefly in the home. The responsibility falls heavily on the parents because the child is not ready for a formal program. Because of the lack of research in the area, the parent is left to do the job without instructional aids. If an impairment is involved the task is awesome; with the multiple-impaired child, the difficulties may prove insurmountable.

Because this book is intended for readers acquainted with

children through experience and/or formal education, basic information is elaborated upon only as it pertains to the visually impaired child.

SPECIFICALLY THIS BOOKLET:

- Describes the visually impaired child in terms of basic needs shared with all children; secondly, relates his specific needs to his particular characteristics and ways of functioning, one aspect of which is his visual impairment.
- Presents in outline form, certain developmental sequences through which children normally pass prior to admission into a formal school program.
- Discusses in specific terms the special helps needed by visually impaired children to circumvent or minimize their visual problems while developing more completely and capably other means of learning and living.
- Lists and describes educational materials especially suited for the visually impaired child as he develops and learns. More detailed information on APH materials can be obtained on request from the Instructional Materials Reference Center.
- Names and identifies salient agencies, programs and services providing information or aid for the young visually impaired child and provides and catalogs a bibliographv of pertinent books and related resource materials.

Carol Halliday

ACKNOWLEDGEMENTS

This booklet reflects the interest, knowledge, and efforts of many people who helped greatly during the twelve month period in which the problems of understanding and working with the young visually impaired child were studied.

For giving generously of their thoughts and for sharing knowledge and materials, special thanks are due: Dr. Grace Napier, Mel Weishahn, Mrs. Ina Kurzhals, Mrs. Jane Wegehoft, Mrs. Virginia Murray and Mrs. Betty Wommack.

Particularly fruitful visitations and staff conferences were made possible by: the Demonstration and Research Center for Early Education, George Peabody College, Nashville, Tennessee (DARCEE); the New Nursery School Research Project, Colorado State College, Greeley, Colorado; the Utah School for the Blind, Ogden; the Texas School for the Blind, Austin; two Project Head Start Styles classes, the Department of Psychology, University of Louisville, Louisville, Kentucky; the Delta Gamma Foundation for Visually Handicapped Children of St. Louis, Missouri, Inc. From the latter group came the photos which enliven the printed pages.

In March, 1969, a committee composed of Miss Barbara Dorward, Mrs. Kay Horton, Mrs. Ina Kurzhals and Robert Winn met in an advisory capacity to determine the guidelines for further development of this booklet and related educational materials. Special appreciation is due this committee for its wisdom and thorough planning.

Chief among those who gave time and effort to reading, constructively criticizing and specifically suggesting improvements and expanded thinking are: Dr. Natalie Barraga, Mrs. Dorothy Bryan, Miss Freda Henderson, Mrs. Ina Kurzhals and Dr. Carson Nolan.

Those who gave specific consultative aid in relation to visual impairment were: Dr. S.C. Ashcroft, Dr. Natalie Barraga, Miss Dorothy Burlingham, Mrs. Selma Fraiberg and colleagues, Mrs. Ina Kurzhals, Miss Pauline Moor and Mrs. Virginia Murray.

Beyond the resources identified, numerous helpful and informative letters and other contacts concerning all aspects of the study have made this booklet the result of a truly collective effort.

Undergirding the entire effort has been the supportive grant money made available by the Bureau of Education for the Handicapped, U.S. Office of Education, Grant # OEG-2-6-062289-1582(607). This project, 272036, is made possible under Public Law 88-164, Title III.

CONTENTS

Traditional definitions of blindness and of partial-sightedness have been based on acuity and/or a narrowed visual field. Both definitions have been measured on the basis of what the normally sighted person might see at a given distance. Such definitions, in large measure, have been drawn up to allow the establishment of visual impairment in legal and economic situations. In recent years, definitions have become more attuned to the life situation. For example, from the educational point of view, the blind child is now considered to be the child who learns educationally through braille and related media with little or no residual vision employed. The partially sighted child is felt to have useful vision for educational purposes, but is limited to the extent that some special educational provisions are necessary.

Technically speaking, the degree of visual efficiency cannot always be accurately determined. Medical examinations can determine tissue and structure deficiencies only and, in this sense, provide the most limited and conditional measurement. When a child reaches a certain ability level and can make appropriate responses, tests of visual acuity can be made and the results described numerically both in terms of near and distant vision. One may still not know, however, the child's true visual acuity or the visual functioning levels which he may be capable of attaining.

The evaluation of visual behavior is strongly affected by factors such as the child's ability to sit still, to attend, to follow directions, to understand and to use words. An inaccurate measure may result from failure to recognize the amount of vision in each eye as well as the ability of the child to fuse the images received by the two eyes. An incorrect measurement may also result from peripheral elements such as the presence of a stranger or the unfamiliarity of the room where the young child's vision test is being conducted.

Obtaining a correct test result is not the only difficulty involved. Even when acuity measures can be accurately obtained, the whole story of a child's sightedness may not be known. For example, children with identical acuity readings will have considerable variance in actual visual functioning. Several factors explain this. One, at least some degree of increase in effective use of residual vision can be taught. Again, adequate motivation to see as much as possible can be encouraged and developed. Often, as data from current educational programs for older visually impaired childred indicate, there are legally blind children capable of reading print of various sizes. Finally, the individual child's functioning is being systematically affected by increased attempts to place children in educational programs appropriate to their needs (i.e. the right program for the child who has more

than one impairment). The obviously unsatisfactory method of placement based on visual acuity findings **only** is fortunately becoming less common.

One frequent and unfortunate problem in the diagnosis of visual impairment is a too early pronouncement regarding a child's ability to see. The mother who is told her child is "blind" (a term which for legal or practical reasons is, regrettably, often used when the child possesses a substantial amount of vision) may very well not realize those objects the child could see and should be encouraged to look at visually.

Relatively few children have total blindness, that is, the absolute inability visually to distinguish day from night. Those with even the slightest vision can be helped to develop that degree through use and in that way can learn to use what vision they possess with increasing effectiveness. If such youngsters receive no visual stimulation and fail to be helped in putting to use what vision they have, their visual ability will deteriorate.

A growing body of data on the problems of visual perception in children already clearly indicates the necessity for care based on each child's individual needs. For example, children with such problems may experience subtle kinds of learning difficulties. They may evidence poor eye-hand coordination, low ability to pick out and organize details, weak figure-ground discrimination, and faulty visual target-following. The major need of these children is education for effective visual use. With this education, they will minimize their functional defects whatever the cause. Many of the helps essential to the child with little or no vision will not be necessary for the child whose problems are perceptual. Vision which he possesses, if properly trained, permits him to observe gross movements, postures, and facial expressions, as well as to discern sufficiently distinct sizes, shapes and colors. The content, quality and accuracy of the visual information gained by a given child can, of course, be determined only by learning from the child himself, as he functions in each new experience. If questioning or observing reveals the need for more refined helps, these can usually be provided for the younger child. Such help will best be gained from the available literature on the **visually perceptually impaired child** or from agencies dealing directly with this concern.

In summary, a formal medical definition is neither the only nor the final criterion for determining the child's visual impairment. In addition to the medical consideration, the child must be thought of in terms of his degree of functional vision. Effective educational programs are expanding these visual

functioning levels. The results of such programs point to the need for further efforts in that direction and refute the practice of classifying children simply on the basis of a medical diagnosis and/or visual acuity finding. Visually impaired children are normally considered to be those who show by their actions and general functioning that they learn more efficiently by ways other than visual or who must implement, supplement, or substitute for their visual learning through touching and listening.

In view of the foregoing considerations, this study is concerned with the need for special helps during early childhood for two basic groups: 1. children with no vision; 2. children with relatively little vision (those who see light or large objects at short distances, or small objects held close to the eyes) but whose vision can be used and can probably be educated to increased functional effectiveness.

Among the characteristics typical of all children from birth are needs, feelings and potentials for growth. All youngsters need: to be loved and to return love; to be able to trust both people and things which have meaning to them; to develop increasing trust in themselves; to be cared for and to care. They must be able to move about freely and exercise their bodies in order to attain the best health possible. They must learn in all kinds of ways: through their senses, through play, through work, through exploration, through trial and error, and through being taught. They have to feel accomplishment; they must feel responsible; they must grow, learn and develop within good commonsense limits; they have to develop a firm, happy, self-respect. All children are open to development physically, emotionally, socially and intellectually.

Every experience which a child has affects him. Each can help him retain more firmly what has been learned before, can open new doors, can encourage him and can aid him to become each day a more happy, fully alive being. In every way, children must be allowed and helped to live as receptive, responsive, warm and increasingly self-sufficient persons.

The Visually Impaired Child

Children referred to by terms "visually handicapped," "visually impaired," "blind," or "partially sighted," will range from those who do not see at all to those who may see rather well but who are confused by what they see because of changes or distortions brought about by their visual mechanisms. Regardless of how a child sees, however, he is much like other children in terms of basic needs and feelings and in general responses to growth processes. Moreover, he is not only a child but an **individual** child. His visual impairment is one additional difference, one further distinguishing feature that makes him himself. A comment is appropriate at this point regarding use of the terms "impairment" and "handicap." It is now generally accepted that the former refers to the physical fact of difference, of limitation, the latter reflects the psychological ramifications of impairment, which are learned from others and are not inherent in the impairment.

Certainly, children who do not see, or who see partially, have a different view of their environment from those who are visually oriented and who see well by usual standards.

Boys and girls who are visually impaired:

1. Must be systematically introduced to their world—the people and things around them, even to themselves. Things learned

relatively casually through visual means must be consciously taught when vision is limited.

2. Must have opportunity to know, understand, and develop their bodies through physical movement and exercise.
3. Must be encouraged to use whatever vision they have.
4. Must get ideas about other people, how they are reacting, how they are feeling and what they are doing through their voices, rather than from facial expressions, gestures or from eye-to-eye contact.
5. Must develop an understanding that there are certain things that may not be touched (clouds, snowflakes, fire).
6. Must be with other people often (adults as well as children) to know them and be known by them and in order to expand their experiences and their personal/social selves.
7. Must learn at appropriate times in their development to do things for themselves, just as all children must learn these things.
8. Must be taught through the growing, expressed understanding of those around them that they are learning to know the world correctly despite their visual impairments.

Questions will arise as the visually impaired child grows and develops. Those who live around him will grow in their understanding of him, but confusions may also abound. Parents should realize that they have a wealth of information about their child from their experiences together. Especially valuable is a record of things done and learned by the youngster (dates by which he learned to do something on his own, or on which he first did or said a certain thing) and a record of questions about his behavior. This will be of value when parents talk with others about their child, and it will aid them in following the child's accomplishments as well as the areas in which he needs specific helps.

Parents and others working with the child must develop the abilities: to observe the child, to recognize how he learns, to evaluate how and what he sees, to note what he does well, and to discover where he needs special aid. The growing knowledge and understanding of the child should be combined with an enriched knowledge of technical and other available aids. There should be consultation between parents and professional persons whenever possible. Parents sharing with parents of other visually impaired children (not solely on the basis of imapirment, but on the basis of their like needs) can attain results both encouraging and fruitful. Periodic general medical check-ups are a must, along with regular, thorough ophthalmological attention as required for the child's particular eye condition.

The Early Childhood Years

The early childhood years have always been recognized as important years, but recently this importance has been greatly

emphasized. Much is being written now about intelligence, how children learn, and the impact of the emotional climate especially where the infant is concerned. Intelligence is not simply inherited, but is developed through the child's living within his environment. It is extremely necessary for him to be loved in a constructive way, from the time of birth on, and to learn to return love. It is vital that he be given guidance and discipline which allows him just enough choice, but does not leave him on his own when he is not ready for this. He must have many opportunities to move around and exercise and to use all of his "working" senses in getting to know his world. There are certain sequences of learning through infancy and childhood which, if followed, enable a child to learn much more than he would otherwise learn. It is being discovered that there seems to be certain "best" times for children to learn certain things faster and more easily. Most important, however, is the realization that how a child is received, accepted, stimulated, and appreciated in his home and how he learns to feel about himself have great influence on how he lives and grows into adulthood.

Generally speaking, as a child becomes older there are certain activities he can be expected to do best in terms of his muscle and bone development, his neurological maturation, his experience, and his emotional and intellectual growth. No longer is it thought that a child left to himself will develop to his highest potential. For the most part, the more he learns the more he is ready to learn and the more he opens himself to further learning and development. Children, from infancy, must be encouraged to hear, smell, taste, feel, see and use their muscles in order for them to become increasingly capable in all of these areas. They must move about, be with people and learn to do things, all of which call for much more showing how on the parent's part when the child is visually impaired than if he is not. Talking with children so they learn that words make sense, that words cause and describe actions and reactions and that words help them know themselves and other people is now felt to be one of the most important ways of enabling a child to learn and to become open to learning more.

As was previously noted, most persons today who are knowledgeable about child development feel that there is a certain order to how children grow and learn emotionally, physically, intellectually and socially. This order is affected by the persons around them, the rest of their environment and the biological "selves" with which the youngsters are born. In any one child, there can be faster growth in one part of his being than in another. Within the general growth and learning sequence, each child is enough different at a given chronological point to make comparing children by age not useful, even misleading. Equally important with how quickly a child grows, matures, and develops is how he continues to feel about himself and his worth as a person. Especially must it be remembered

that how children feel about themselves most often results from how they think those who are close to them feel about them. This makes it imperative that a child be known in the fullness of his person rather than simply as a child who is visually impaired.

How Children Learn

The principles which follow afford a frame of reference which organizes the basic learning and developmental processes. The principles are not in order, necessarily, either as they occur in time or regarding importance. For the most part they are so interrelated that absolute separation into a distinct sequence would be impossible. Some of the examples given, or specific principles, could serve as illustrations for other principles. With these thoughts in mind, this over-view of the ways in which learning and development take place is to be considered.

In general, a child learns and develops:

- From more **body** involvement—To less **body** involvement

Example: The child begins first to reach for an object with his whole body. As he progresses, he becomes capable of reaching by use of the arm and hand only. The rest of the body becomes increasingly used voluntarily only as it is necessary to accomplish the particular reaching problem.

- From **large muscle** usage—To **small muscle** usage

Example: The child learning to undress himself usually is able to take off his shirt or hat before he is able to undo a button.

- From the **familiar**—To the **unfamiliar**

Example: The child who has learned to know one dog will be more receptive to other dogs in other settings.

- From **simple** tasks—To **harder** tasks

Example: The child learns first to put one box inside the second; he then can "nest" three, four, etc.

- From **immediate** concerns—To **remote** concerns

Example: The child begins first to understand how to wait "just a moment" before his walk. He then learns to wait for increasingly longer periods of time. After sufficient experience of this kind, he finally knows what is meant when he is told in the morning that the walk will take place "after your nap."

- From **short attention** span—To **increased** attention span

- From one concern—To **several** concerns

Example: The child learns first to do simple things which his mother asks him to do. With practice, and over a period of time, he learns to follow a series of directions (i.e., "Please put away your wagon, then wash your hands and sit down at the table.") Since he now knows how to do more things and to see a relationship between one step and another, he is capable of more concentrated attention for a longer period of time.

- From thinking of **himself**, as the center of his world—To thinking of **others**

Example: The infant and young child are very busy learning about themselves, their feelings, how to use their bodies and how to get the attention and help of others. As the child matures, his increased self awareness and intensified experience enable him to understand better the point of view, interests and feelings of others.

- From things "**lived**"—To things "**thought**"

Example: The child's world is at first a very concrete one, made up of things he can see, feel, smell, hear and do. His reactions and actions in his world are equally concrete. As he matures, he learns to speak, to use words which help him think and express abstract ideas. As his language power develops, his thoughts take on depth and breadth and play an ever enlarging role in his interactions with his world.

- From using words as **labels**—To using words as organizers and enablers of **thought**

Example: The child's first words merely name things and persons. As his use of language develops, he learns that Mother and Daddy and Jimmy are all people and that chair and bed and table are all furniture. He thus begins to organize the world around him into verbal categories which he retains in his mind and uses to talk about his world with others.

- From **one-word** sentences—To expressed **thoughts**, ideas

Example: Children begin by using a word such as ball to express many things: a request to find it, a wish to play, a liking for it. As their vocabulary grows and words become more meaningful to them they express deeper and broader thoughts and increase their ability to think.

- From **doing**—To **sensing**—To **symbolizing**

Example: The very young child DOES everything. He learns, thinks, and experiences his world by participating in it with his whole body or its major parts. For instance, at first he is shown how to play ball by having the ball put into his hands and being helped to move it. As he becomes more mature he increasingly observes and reacts with his senses and through the muscle-and-joint "feel" of what he experiences. The child now becomes interested in the ball's characteristics (form, color, feel) or in observing and in learning how to play with it himself. Still later, the word "ball" used in a sentence may awaken in him a desire to play with that toy. He may begin to notice the ball is round and that other things in the world are round. Eventually, he begins to understand that there are many kinds of balls. Finally, he is beginning to think symbolically and to use this and other words in a symbolic way.

- From **field dependence**—To **field independence**

Example: Children begin by being involved only with things immediately around them or immediately apparent. They are not able to think ahead to wait for something to happen or to visualize an object which is not before them. As they develop, they become more capable of thinking about things which are not in the immediate environment. Plans can be made for a day ahead, a toy can be chosen even though it is out of sight, or thoughts can focus on a subject far removed from the present moment.

- From **analysis**—To **synthesis**

Example: It is much easier for the child at first to take apart a toy or to figure out the "why" of an experience than it is for him to put "pieces" together. It is a more advanced stage to recognize or synthesize the toy from its pieces. It is still more advanced to imagine the consequences of an experience based on its causes. (i.e., Eating too much candy results in being sick.)

- From physically taking apart or **undoing**—To physically putting together or **fastening**

Example: Children first learn to take off socks or hats, or to undo the door latch. Later, and with more skill required, they learn to put on a garment or to fasten the door.

- From **outlines**—To **details**

Example: The child first is aware only of the main features of an object or an idea. He may notice that the over-all shapes of two objects may make both of them "balls" but may not notice that they are of different sizes.

He may hear the first part of a sentence and understand it, but completely miss the significance of the last part. As he matures and learns, he is able to notice and react to more than one detail. For instance, he can learn to think of his ball as round, made of rubber and big while another will be round, made of wood and small.

- From **identifying**—To **comparing**

Example: As youngsters learn to recognize the overall object or goal and the details that make it up, they begin to compare one object with another or one goal with another. They can see differences and likenesses and later make choices to serve a particular purpose.

- From recognition of **differences**—To recognition of **likenesses**

Example: The child learns first to tell how things are different. For instance, he notices that two chairs are different because of their feel, not that they are alike because they can be sat upon and have four legs and a back. Again, he learns to choose one object from three that is not like the other two, before he can choose those two, of the three, which are actually alike.

- From **recognizing**—To **reproducing**

Example: Before the child can make a likeness or reproduce a given object he has to have learned to know its main features. He cannot be expected to mold a clay model of an object or to describe it until he knows that object from his own experiences.

- From recognizing **opposites**—To determining varying **kinds of relationships**

Example: At first children think and act in terms of "either . . . or." They understand the words "big" and "little" but not the fine degrees in between. As they mature they can grasp shades of meaning. They learn that size is relative and that many other things, too, depend for their meaning on the things with which they are being compared.

- From random ordering—To **dimension** ordering—To **several-dimension** ordering

Example: The child begins by simply bringing objects together. Later, he learns that he can put these objects in order by size (big to little). Still later, he learns to put in order by more than one characteristic (height and roughness). As his vocabulary and language develop, he learns to order abstractly, as well.

- From **categorizing**—To **establishing hierarchies**

Example: The child learns to put into meaningful groups the objects around him. He does this with his thoughts, too. He learns that apples are of different kinds, but all are called apples. He learns that apples are fruit which can be eaten. He learns that there are many kinds of fruits. Some man can eat, some he cannot. In this process the child not only groups his knowledge but learns to rank each thing he knows according to its relative importance.

- From **perceiving** objects, through the senses—To **noting** their **use**—To **naming them** and their uses

Example: In learning about a cup, children first experience a cup as something with a handle, smooth to touch and of a certain color and size. They then are aware of the uses of the cup (to drink from and pour from). Perhaps much later, they group cups with other eating utensils or with a "place setting" or as a plastic or a ceramic object.

Additional Concerns

The following points are added for emphasis to give the clearest possible explanation of how the child learns and develops. Unless indicated differently, the points pertain to all children.

1. The ways adults feel about their children and the realism of the achievement goals which they set up for the children are extremely important. The range and degree of achievement of today's visually impaired adults indicate that visual loss does not necessarily set the limit for an individual's life goals. Although the visual impairment may at first cloud the picture, focusing on the individualities of the child will enable parents and others to set up appropriate expectations for him.
2. Children need encouragement and increasing challenge to learn, but they must not be overwhelmed.
3. It is important that children have many opportunities for hearing, touching, seeing, smelling, tasting, and feeling through use of their muscles and joints. In this way, they begin to know their world and begin to feel safe in their expectations of that world. The visually impaired child often must be purposefully helped to experience what the sighted child attains casually.
4. Play is a valuable teacher of children. Through play, youngsters learn to try new materials, to create and construct, to pretend, to act out some of the important things on their minds and to get along with others.
5. Children first are interested in the things and persons closest to them. Slowly their worlds widen as they grow older and they become increasingly curious about the world beyond arm's reach. With visually impaired children it is especially necessary to show them the world and to encourage this curiosity and the desire to discover.
6. There should be many opportunities for children to see adults "at work" doing useful household tasks. In this way youngsters begin to learn responsibility and the realities of life. Hopefully, they will learn that work can bring pleasure and satisfaction and that it should always be well-done. The visually impaired child must have his world deliberately shown to him, since he is unable to observe much of it without help.
7. It is important that children not have too many learning experiences at one time. They need opportunities to repeat words, actions and activities until they feel comfortable with them. Sometimes the line is exceedingly fine between a child's being busy and encouraged to succeed, and his being driven by too much demand and help. If the child is growing more independent and is enjoying life generally and if those around him are comfortable and relaxed, the approach is probably a wholesome one.
8. Even greater importance is being attached to the child's use of language. It is now understood that children improve in their abilities to organize ideas and to think through the words they use. Vocabulary and manner of expression develop with experience and use; and experience and use of words develop with improved and broadened vocabulary and manner of expression. The language used with the child contributes to this process. Particularly when a child is visually impaired, special and repetitive efforts must be made to have

words make real sense to him. A child for example, needs to know about fire, but never put his hand to it. He must be helped to experience different aspects of fire, largely by the words used to describe fire. This knowledge is developed over a long period of time through graphic verbal interpretation about fire and involvement with different aspects of fire. The heat, the sound, the odors, the changes made by fire all influence the understanding of what fire is. In every teaching situation the choice of words should be such that basic meanings are attained and the youngster is not confused. Well chosen words are of value to all children. For children with visual impairments, word choice is particularly important. The words presented to these children do even more to tie their worlds together and give them meaning.

9. Children learn better when they watch and hear how to do a new action; then, do it themselves, talking about it as they carry out the action. The visually impaired child depends far more on this method of learning. For example, he must watch and listen as he is shown how to use a child's tool. He probably watches best by putting his hand on the hand of the adult who holds the tool or by having the adult's hand encompass his while the two together cause the tool to perform its function. As the tool is used, verbal description of a conversational sort explains the ensuing actions. The child's talking about the actions will help him master their procedure.
10. More and more there is an awareness of a certain order to a child's learning and developing. Certain things are learned better and more easily if they are undertaken after other things have been grasped. A youngster may show no interest in a wagon at first contact. Later he may enjoy its use for numerous purposes and want to learn about the wagon's features. There seems to be a "right" time for learning which varies from child to child. (The developmental charts will elaborate on this.) A child's not learning a given skill or behavior on first exposure does not mean that he will not be ready for it later. Numerous attempts over periods of time and frequent repititions are necessary for learning to occur. Remember that what children do and think begins with the simplest and moves in an increasingly complex direction.
11. Of vital importance to all children is their learning in directions which allow and encourage them to become independent. This is particularly imperative for the child who has any major impairment. The natural tendency is to do for this youngster. This natural tendency is often so strong that it takes a real concentrated effort to control it. If the child is to grow into a healthy and productive human being, he must be helped to gain the tools (skills, knowledge, attitudes) which make this possible. Within the bounds of good sense, every person should be shown how to do for himself those things which make him feel self-confident and capable of managing his world. Yet, each must learn when help from others should be sought. This is particularly true

of the visually impaired individual who must throughout life honestly recognize and evaluate his need for help in certain areas. He needs to learn how to ask for this help in a way that enables him to keep his self respect, and he must learn to be alert to ways in which he can offer aid to others in areas where his abilities are sharpest. There is a story of a twelve year old boy with no vision who when camping with a group of sighted twelve year olds delighted his buddies by going out in late night in a downpour to let down canvas flaps over windows. They reasoned that he did not have to hold a flashlight in order to see what he was doing. Thus, both hands were free for the necessary work! It is essential that the child who is visually impaired learn to care for himself personally and to share in household responsibilities even though it takes much effort on his part and on the parts of those around him. If he does not learn to be independent he will be less of a person because of it. Those around him will realize his dependency and inadequacy and will assume it to be the result of the visual impairment. Actually it will have resulted, to a far greater extent, from lack of experience and appropriate teachings.

The growth and learning patterns of children can be studied as guides for setting up reasonable expectations for them. The study of actual patterns is especially valuable when one recalls that only the outside limits of development are set by heredity. Within these limits much variation can occur, depending on each child's experiences in his world.

Generally, as youngsters mature, certain patterns of growth unfold. These are the same in many directions for most children, whether they have visual impairments or not. How quickly and how extensively these patterns develop are highly individual matters. Comparison with other children can scarcely be helped but it is far better for a particular youngster to be helped to progress at a rate which seems comfortable yet interesting for him. While patterns can be an aid, deviations from them need not cause alarm.

Careful observation of the child's attitudes and behavior can dispel fears that the child is not functioning at his proper level and pace. A happy, independent and responsive child usually indicates correct growth progress.

Growth and development patterns to be considered are in the physical, personal/social (including self-care), intellectual and emotional areas.

PHYSICAL GROWTH AND DEVELOPMENT

As children mature and learn to use their bodies in increasingly complex ways, certain directions are taken:

When youngsters are quite small their activities involve their whole bodies. Gradually, they become able to use one, then several body parts. A good example is ball play. This, at first, involves a scramble of total body activity; later the body movements become more specialized.

Children first learn to use large muscles which allow them to reach for and grasp at objects. Eventually they are able to pick up things by means of the whole hand, then fingers, thus using increasingly refined muscle activity.

The infant develops in a head-to-foot manner. He learns to lift his head and to hold it up, to use arms and chest in a total way, to pull and scoot along a surface, to crawl, and to use feet and legs in order to walk.

As the child learns to control his head (that is, when his head will stay in line with the middle of his body) while he is on his back, he changes from a one-sided to a "symmetrically two-sided" phase. This change means that for a time

the child is acting with both hands and arms at the same time, in the same way. More advanced one-sided actions come later, after much practice with the bilateral. Still later, the child begins to show a preference for the use of one side of his body over that of the other.

First actions of children make use of many muscles. As they mature physically, they become better able to use fewer muscles and to involve just those needed to do a certain task.

The child with a visual impairment needs, even more than many other children, to feel the pleasure of moving about and knowing how to move in space in different ways. Often he must be shown specifically how to crawl, to roll, to walk, or must be given particular encouragement in these. He very likely will not see well enough to notice on his own how these things are done. This may necessitate carrying out an activity close to the child so that he can tell what is being done. It may require allowing the child to look with his hands at the physical activities of another to get the feel of a certain action.

Children need to be "shown" and to learn the areas where they will spend most of their time. While there are certain established ways for the effective teaching of basic motor skills and bodily movement, it is of first importance that the child move, explore and be curious. More refined "orientation and mobility" techniques can be learned later.

The child who does not know how to move about and use his body will have a narrow, fearful world and will feel unsure of himself in it. As the child learns to know how he can use his body and as he feels more comfortable with it, he will become more self-confident and happy.

The physical development sequence follows. General directions in which the child develops physically are ordered as they **usually** occur, within each grouping. As is known, a child can be at different levels in the various groupings at the same time. No mention is made of age since it is the continuing progression that is of first importance rather than the point in time at which a certain functioning stage is reached. These principles apply in each developmental sequence presented unless otherwise indicated.

The comments specifically regarding visually impaired children are ordered by number (where feasible) to relate particularly to those of like number at the left side of the page. It will be apparent, however, that there is much overlapping in the points made.

It should be noted that the visually impaired child can eventually pass, quite well, through the steps assuring good gross

motor (large muscle) development. He will usually do so more slowly than the sighted child, however. Latest findings show that vision begins to coordinate the gross motor process when the infant reaches the age of four or five months. The visually impaired child is believed to coordinate the gross motor process by hearing and only when the youngster is about ten months old. It is possible that this process may eventually be accelerated. Certainly its attainment will vary with individual children. The point remains that, at present, ear/hand coordination seems to ripen later than eye/hand coordination. Knowing this, it is not difficult to understand that the visually impaired child will experience a different rate of development in certain areas.

DIRECTIONS IN WHICH CHILDREN DEVELOP PHYSICALLY	COMMENTS SPECIFICALLY REGARDING THE VISUALLY IMPAIRED CHILD
1. Lying on front and back The Child: • lies on front, on back • lifts head when lying on stomach • balances head when sitting, held or supported • rolls over from stomach to back, then back to stomach • lifts head up when lying on back	1. For the visually impaired child, the prone position is not naturally comfortable or interesting. It may even bother his breathing and make moving more difficult when the visual stimuli which make head lifting purposeful are lacking. This does not mean the visually impaired youngster should not lie on his front; he needs to do so (especially in order to eventually become able to creep). Rather, he should be given reasons for holding his head up and for moving while in this position, so that he can do so purposefully. Little objects which will make noise should be hung above him where he will hit them and cause them to sound. His look can be kept directed to his mother's face through her talking to him. He must be encouraged through numerous and diverse ways to lie on his front and back and to become able to raise his head from these positions with increasing success.
2. Sitting The Child: • sits with support • sits alone, briefly, on flat surfaces, leaning forward on hands	2. Sitting also depends on encouragement and help, but can often be learned at about the same pace as the sighted child. The visually impaired child may need to be given a guide for sitting (the "feel" of what this new position is) through being propped up with pillows and/or supported beside another's body. Giving the child reasons for sitting will help him want to do so. Those reasons may include: nearness

- sits in chair
- sits independently and steadily, regardless of place
- seats self in child-sized chair

3. Moving about

The Child:

- moves about on flat surfaces

- creeps and pulls self to feet at a rail
- walks sideways holding to rail
- stands with help

to mother; being closer to mother's face (her words); lap games played with mother; the ability to move differently over more space and to reach farther; the ability to make sound.

3. Much care must be directed to the visually impaired baby's use of a play pen. The tendency has been to leave the infant in the pen for long periods because the pen was thought to be a safe, comfortable place for him. There certainly is a place for a play pen in the life of any baby. As he begins to move about, the play pen can provide a limited area which the child gets to know before braving more of the world. It can be made interesting to explore and to experience by furnishing it with different kinds of objects for the child to play with and explore. It can offer a frame support for early attempts to stand and walk. The play pen can serve as home base for the child who is outside it, and it is big enough to be found again relatively easily by the visually impaired youngster who is starting to really move. As soon as these purposes have been accomplished, it is time to put the pen away.

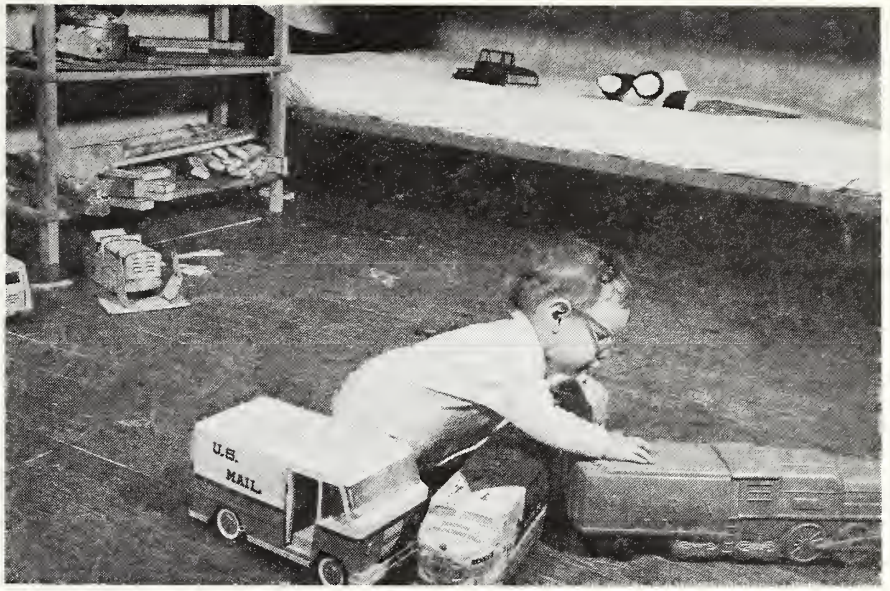
Normally, the child who is visually impaired will creep only after he begins to have ear/hand coordination (the ability to reach toward the source of a given sound). This coordination seldom develops until near the end of the first year. As the youngster shows interest in creeping (getting on hands and knees, for example), he can be encouraged to creep toward sounds, such as a toy which sounds but which is just beyond his reach.

The visually impaired child will stand, then walk with help, much like any child. This learning period is a further opportunity to expand the child's knowledge of his environment. He can be told details of his environment and the changes as he

- walks with one hand held, can stand alone
- toddles alone

- walks about the house and yard freely, with little assistance (later, in immediate neighborhood)

- runs well



encounters them in moving from one place to another. He must be given time to explore and look. When he is ready to walk on his own, several factors must be considered. Besides the problems of balance and the challenge of a new posture which face every young walker, the child with limited vision will have less readily usable information, less casually obtained, to guide his going from place to place. He can attain skill and can gain confidence but will need more time to do so. It will be good for him if furniture is at first left in one place, with breakable things put out of reach. As he becomes older and things are moved occasionally, comments regarding their new positions will be helpful and thoughtful. Though bumps and falls will occur, as they do for all children, a hug or comment, along with an encouraging "try again", will give this youngster the courage to make further efforts. As he improves in confidence and skill, he will begin to organize his world in his mind to the point that he can move from place to place for a purpose and through effective use of memory.

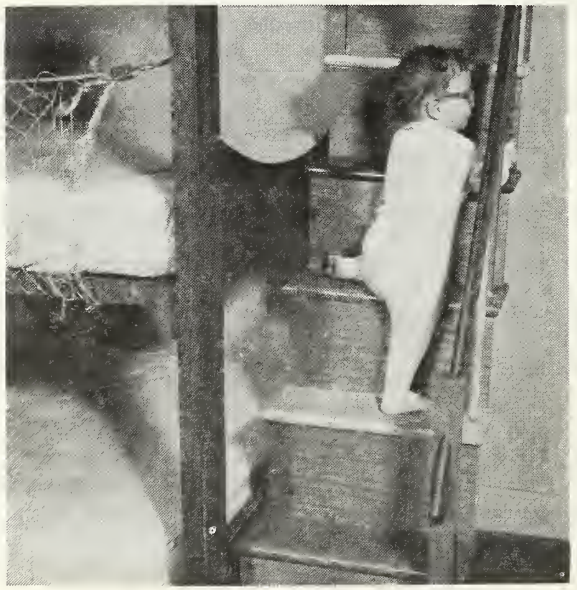
As the visually impaired child moves about he will need help in becoming aware of hazards: what they are, what they cause, how to deal with them. He can be taught that some areas are for play and others are not; that the "gate" marks the stairs at which point he must reach for the railing. He can learn that fingers can be pinched in the tricycle wheel and that the tricycle can overturn. He will learn, but may need to be shown such things a number of times in order to do so.

4. Managing stairs

The Child:

- creeps upstairs, bumps downstairs on his seat
- walks up and down alone, bringing feet together at each step
- walks up (later, down) one step after another, alternating feet
- dashes up and down, adult fashion

4. Climbing up and going down stairs must be shown to the visually impaired child. At first another person might go up a step or two beside him, encouraging and helping him explore and understand what is happening through the repeating of actions. Later, coming down can be done in the same fashion with only a few steps involved initially. The youngster's foot use may be helped if his feet are placed one at a time on the step, with hand position adjusted on the railing. This detailed way of "showing him how" can be followed in teaching the youngster to play ball, jump, etc.



5. Moving, in ways other than walking

The Child:

- bounces when supported
- jumps in place, alone
- jumps from bottom stair step, with help; then, alone
- stands on one foot, balancing several seconds
- skips on one foot only
- hops on one foot
- skips, using alternate feet
- turns somersaults and enjoys stunts (balance and rhythm become increasingly better)

6. Reaching and grasping

The Child:

- brings objects to mouth to explore when they are given to him

5. Sometimes visually impaired children are observed to spend periods of time rocking their bodies back and forth or making certain motions over and over. These "mannerisms" are sometimes mistakenly called "blindisms." This is a poor name because children not visually impaired develop such mannerisms and many children who are visually impaired have not developed them. Such motions and movements often result from a child's not knowing what else to do. People ask whether large toys such as the horse that rocks and the rocking chair tend to start or encourage "mannerisms." This should not be the case at all if the child using them has opportunities for many kinds of play and a broad variety of experiences. When the youngster knows how to purposefully move about, to control his movements and to use his body in ways that are fun and interesting, he then has little reason to resort to "mannerisms."

6. Something must interest the child before he is motivated to reach and grasp. The visually impaired child needs the kind of motivation that makes sense to him. Objects should sound and feel worthy of investigating. While it is natural for the sighted infant to reach with both hands in the beginning (an action necessary for increasing development of good hand use), the youngster who is visually impaired often needs to have things put into his hands or must have his hands put onto objects. There should be suitable toys within his reach. Cradle gyms can have sound makers built in or added. Initially, the youngster would hit these by accident. Later, purposeful reaching can occur. The child who sits should have around him and within easy reach several of his favorite toys. Thus "looking" can be fostered and "finding" can be taught. Toys should be interesting to the touch as well as to the ear (at times, to the "movement-sense," and to the sense of smell). Near the end of

- reaches for things, grasps (both hands first, later, with one hand)
- palm/fingers grasp develops to thumb/finger grasp

7. Playing with toys and equipment involving large muscle use

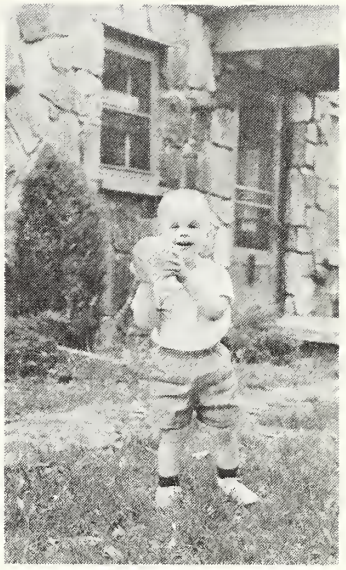
The Child:

- pulls, pushes toys and movable objects

the youngster's first year, ear/hand coordination will occur if appropriate experiences have helped its development. Then, his reaching can be directed toward a particular sound and grasp will have developed to the point that thumb and finger can work together for picking up and holding on to an object.

7. The visually impaired child will enjoy the "gross motor" toys and activities which the sighted child enjoys, but his interests may stem from other than visual features. For example, he will be more aware of sound. The muscular effort involved in actions related to them may outweigh or take the place of the visual experience. Boys and girls who do not see will "look" with their hands or look "close up." For example, they will "see" the tricycle pedals and how they are used by putting their feet on the pedals and having them guided in the "triking" motion as well as through tactual exploration of them. Of course, activities for the visually impaired child require caution. These children need firm, safe, sensible limits within which to function. The totally blind child may trike and bike, but will need help in knowing the areas in which these activities can be done wisely and the cues by which he can know where he is. He must know, for example, that the near squeak of the swing-chain means that he must be alert to avoid collision. Children who see at near but not at a distance need help in formulating guidance for action (where to go more slowly, where to ride freely and where to use caution).

- uses wagon, buggy to push, carry things in
- rides wheeled toys which can be pushed by feet
- begins to ride tricycle
- swings, slides, climbs, uses other "playground equipment"
- uses sled, skates, jumping rope, scooter



8. Playing with large ball

The Child:

- reacts to ball by some kind of movement
- later may walk into, touch, hit at, kick at it
- pushes ball
- catches ball between legs, later with hands, on ground, in air
- hurls ball
- kicks ball
- throws ball in requested direction
- throw, kicks with increasing skill

8. Ball play can be pleasurable as well as beneficial activity for almost any child, provided the ball is of sufficient size for him to handle. Volleyball to beachball size, even larger, is needed. Whether or not a child can see, he can play with the ball himself and explore its possibilities. In a confined area such as a corner or within any defined small space, the ball can be rolled, bounced, kicked, and then retrieved. Sometimes a sounding device can be added to the ball to make it easier and more interesting to follow. A "jingle bell" can be attached to the ball or bells can be placed inside a rubber ball which is then vulcanized. A Voit ball, of volleyball size, exists with a bell already in it but its bounce is limited. Part of the fun of ball-playing involves the social aspects and these also can be built into the game. "How" will depend, in part, on the functioning level of the child in terms of his physical ability and control as well as his ability to understand and use the spoken word. The maturity of his companions is also a factor.

PERSONAL/SOCIAL GROWTH AND DEVELOPMENT

A child begins life as one who needs much attention, care and love. His world moves around him and focuses on him. He takes and he receives from those closest to him. He gives, too, through his actions and physical and verbal expressions. As he becomes older and more experienced, he adds to himself in all areas. He learns to know and manage his body, his thoughts and feelings, and the people and things around him. Starting from a narrow world, his world expands. Beginning with great concern for himself, his own wants and needs, his concern increasingly takes in other people.

The child builds his understanding of himself on the base of things he learns to do for himself, the successes he experiences and the ways he feels others feel about him. If his feeling about himself is good and if he feels he can trust those around him, he will begin to consider those about him and to feel that they are important.

In thinking of the child's development into a personal/social being, first consideration must be given to the most immediate and familiar of his concerns, which is his interest in and awareness of himself. Next, consideration can be given to his relationships within his family and his neighborhood and to the ways in which his community unfolds for him and assumes increasing importance.

DIRECTIONS IN WHICH CHILDREN, GENERALLY DEVELOP AS PERSONAL/SOCIAL BEINGS	COMMENTS SPECIFICALLY REGARDING THE VISUALLY IMPAIRED CHILD
PERSONAL-FAMILY-NEIGHBORHOOD RELATIONSHIPS **1. With regard to general interaction with others** The Child: • has spontaneous social smile • smiles, laughs aloud in response to others • demands personal attention • frequently cries when people,	1. Eye-to-eye contact between parent and child may exist only minimally, if at all, and will be missed very much at first. When it is known, however, that the visually impaired child is going to smile, laugh, cry, and respond to voice and touch, all the many kinds of contact, other than visual, can be enjoyed and encouraged. Though the visually impaired child may not see how one is feeling by one's face or "look," voice and general manner can tell him. Holding him while he is little, embracing him, touching him as he grows older, will help him feel wanted, enjoyed, needed, loved. Talking with him will increasingly help him to understand and feel a part of the world around him.

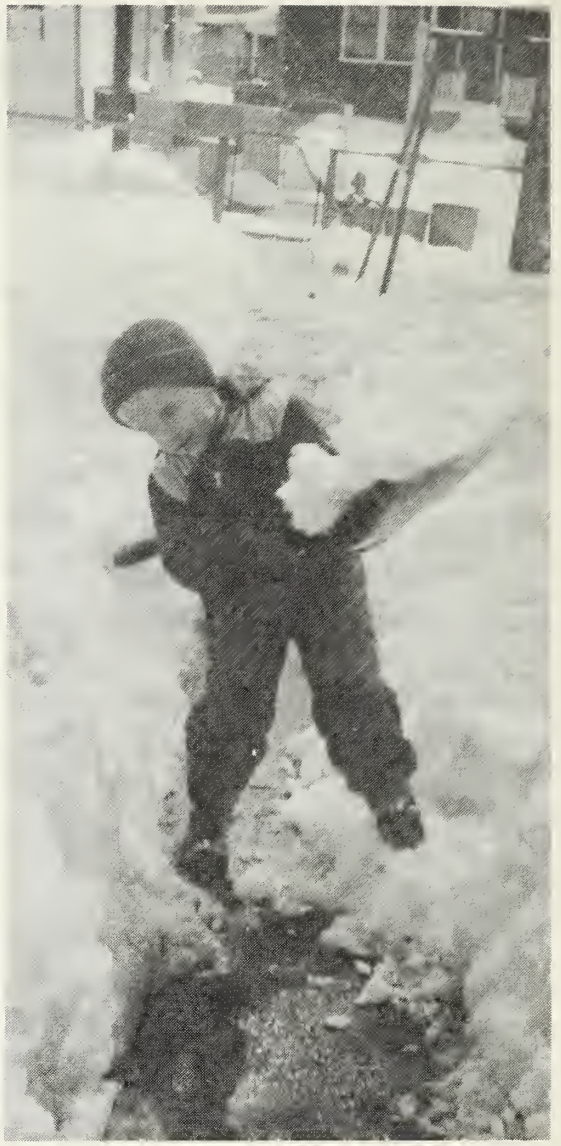
- especially parents, leave room, leaving him alone
- responds to others' facial expressions
- imitates facial expressions and gestures
- plays "pat-a-cake" and waves "bye-bye"
- is more shy with strangers than with immediate family
- begins to vary behavior according to emotional reactions of others
- is apt to repeat actions at which others laugh
- tries to get attention by making noises, etc.
- begins to claim certain possessions
- seeks adult praise for correct behavior
- shows signs of affection, pity, guilt
- tries to make others laugh through acts of his
- tries to please adults, follows directions, responds to approval or disapproval
- shows interest in family, its activity

The youngster who is visually impaired will have an important effect on those around him, beginning with his immediate family. Questions from friends and strangers, thoughtless remarks, criticism, even rudeness, both from lack of understanding and from lack of consideration will be directed to the parents and frequently to the child himself. These events may well cause the parents to question the value of their efforts, to feel they are expecting too much of their child. They, like parents of all other children, must continue in their efforts to learn how their child learns and how he can most efficiently become his best unique self.

The visually impaired child needs more help than the sighted child to become an increasingly responsible and capable person. He needs to be actively involved with his mother as she works around the house. He must be told what she is doing. He must be "shown" and he must be given time to really "look." He must be given simple tasks to do. He can learn to get his own toys, to put them away, to put his clothes in a certain spot when he takes them off, to help wash dishes, to set the table, to make his own bed, to help with the yard work. Such learnings will enable him to feel himself a useful household member.

The child who is visually impaired may need more than the usual help in meeting and learning to play with other children. First of all, his contacts with them call for more planning. He is less likely to begin them on his own since vision plays a heavy part in this regard. Secondly, it is natural, at first thought, to feel overly-protective with this youngster. Anxieties about his safety, that he have his share, that he be treated fairly loom. Awareness of these concerns can enable one to work out ways to manage so that the visually impaired child will learn to be with, appreciate and enjoy others as well as develop increasing ability to do so on his own.

- likes to have little household responsibilities
- becomes more resistant to authority, urge to please adults lessens
- goes on errands outside home
- can put away toys, personal belongings, hang up clothes
- is increasingly well adjusted to leaving parents
- gets around neighborhood independently, though may need watching crossing streets
- is more protective of younger brother, sister, although not dependable in taking care of them
- likes family excursions, outings
- more sensitive to reactions of others
- responds negatively to pressure, apt to become rude or sulk when criticized or punished
- can help around house and yard with simple tasks and responsibilities
- can run errands with responsibility for small sums of money
- can go alone or with friend to school, church, store even if streets are crossed



2. **With regard to play** (through which children increasingly interact with others and become acquainted with their world)

The Child:

- plays with own hands, fingers, holds toys and plays with rattle
- can amuse self alone for some minutes
- bangs toys
- responds to music
- examines toys, moves them from place to place
- hugs doll or stuffed animal, carries it around
- likes to play with sand, mud, water; likes to pour them; later creates with them
- plays on solitary level at first, then develops awareness of other children, but does not play with them
- can figure out ways to overcome some obstacles (such as closed doors)
- avoids simple hazards
- is beginning to claim certain possessions as his own
- shows toys or offers them to someone else as means of social contact

2. There are some special points to note regarding the play of the child who is visually impaired, among which the following are salient. While the infant is still in his baby bed, toys which make noise and are interesting to touch should be placed above and around him. His movements of hands, feet, and body will cause the sounds and give sensations inside and outside himself. These will motivate him to further investigate the world around him. When the youngster drops a toy (for example, the rattle with which he is playing) and the adult is there to notice, the child should be helped to look for it (as appropriate in terms of his functioning level) until he eventually learns that things dropped do not simple disappear but can be found through his own actions.

The visually impaired child needs to learn to follow sound. When he is quite small, he can be helped to turn toward a certain sound. As time passes, he can learn (with help) to reach in the direction of the sound. Through many contacts with objects and their sounds, he can learn that certain sounds and objects go together. Over a period of time, he will begin to develop likes and dislikes regarding materials and activities, as is true of children, generally.

In choosing toys for the visually impaired child it is important to look for those which are interesting to the touch, to muscular feel, to hearing and to smell, as well as to whatever remaining vision he may have. Sometimes a toy can be changed to better serve this youngster's needs. The addition of a different texture (or a bell, as discussed earlier) may be appropriate. While there are many suitable toys which can be bought or made at home, the visually impaired child will also enjoy household objects such as pots and pans, as do most children. Cardboard boxes, waxed paper, ice cube trays, old spools and jar lids can become excellent play things. Where

- Likes to play near other children, often doing the same thing, but does not play cooperatively
- engages in imaginative play (such as putting doll to bed, feeding stuffed animals)
- initiates own play when given interesting materials

- helps put things away, can carry breakable objects
- begins to take turns, share in play with other children
- often has ideas too complicated for him to carry out
- plays cooperatively with other children, knows to take turns, share, though may not always do so

possible, toys which serve several purposes should be chosen. Not only does this give more range of use for a longer time, it also enables the child who uses a given toy to see that he can cause different things to happen with the same object. For example, a singing top can first be rolled, felt, or banged. Later, it can be pushed down on and spun, with a special noise resulting.

As the visually impaired child becomes older, he can learn to find his own toys and to put them away when he is through with them. In this way, he increases his ability to amuse himself and to keep himself busy. Besides needing toys of his own and places to keep them, he needs certain other possessions of his own which will help him feel more an individual and more worthwhile. Having his own coat hook and towel, each within easy reach are a help. His own part of a closet or drawers for putting away clothes which have been marked with a button or other object for his easy identification of them, are important to his learning to assume responsibility for himself.

Children often like to play at keeping house or at doing household things. Through these activities they acquire basic learnings. The child who is visually impaired is no different, but needs many more consciously planned opportunities for observing what is involved in such tasks as dusting, washing dishes, doing laundry, sweeping, raking, etc. He needs to be encouraged to accompany the adult who is doing these things. He needs countless opportunities to understand what is being done and why.

Doll play, in the usual sense (the doll used and treated as a person) comes naturally

- prefers children to adults
- prefers to play in a group, but often has a special friend
- may often brag, exaggerate to other children
- with special guidance, will avoid interrupting play or conversation of other children
- likes to sing, dance, play records
- participates in singing games and dramatic play
- likes to "dress up" in adult clothes
- adjusts readily to group situations, has learned to cooperate, knows rights of others
- plays active games of a competitive nature such as tag
- accepts adult supervision better, is more interested in conforming to rules, regulations
- is spurred on by competition
- engages in rough and tumble play, likes stunts, gymnastics, physical activity
- seeks and finds own friends
- is more aggressive, independent in group, disagrees more with other children since he now has ideas of his own

to most sighted children at a young age. Very small likenesses of real objects, whether dolls or cars, have little meaning, in the usually understood way, to young visually impaired children. They are not able to understand, with their fingers, what these small objects represent since the ideas of the real objects are not clear until they have been experienced directly many times. Early doll and car play, then, will very probably, at first, have values and meanings for young visually impaired children quite different from those for most sighted youngsters. For example, the feel of a doll, its shape and the sound it makes would probably take priority, initially, over feeding the doll, putting it to sleep, etc.

A reasonable amount of noise, dirt and messiness must be expected, even desired, where the visually impaired child is concerned (reasonable in terms of the child, especially, though the feelings of his family have to be considered, too). The child becomes acquainted with certain materials and objects chiefly through the noises they make. In order for him to begin to know such materials as mud, sand, water, snow, dry leaves, paint, etc., he will have to feel and smell them. The wearing of old clothes by the little one and the use of "protectors" and "cleaners" such as newspapers and paper towels will help make these necessary and valuable experiences much more bearable to those in his household.

Certain things which the sighted child imitates through observing visually will have to be introduced to the visually impaired child by the adults around him. In some cases, much practice may need to follow. These activities include turning the knob to open a door, opening and closing drawers, carrying, setting down what is carried, putting things away, unlatching, picking up objects which have dropped, pouring.

- begins to differentiate regarding play interests in terms of sex
- very much likes to dramatize, pretend
- is more sensitive to adults' reactions

It is a real temptation to use records, radio and television to excess with the visually impaired youngster. He will probably show interest in these from an early age, as do most children. Adults around him, not knowing the damage that can result, may overexpose the child by leaving him alone in his baby bed or play pen, with the constant sound of music or the human voice via artificial media surrounding him. Selected records, particularly, can bring pleasure and teach, as well; but poor choices or indiscriminate use can do more harm than good. The constant playing of radio, TV, or records can be a highly unreal experience. The visually impaired child, especially, needs much more than this kind of passive "entertainment." For him, it is vital to have many chances to get to know his world first hand and in an active, adult-shown way.

SELF-CARE SKILLS

Attaining self-care skills is of great importance to any child. There is a certain confidence in himself which a youngster gains by knowing he can take care of his own basic needs. It is essential that this self-confidence, based on reality, grow steadily in positive directions. The visually impaired youngster can have the same feeling of self-confidence appreciated and enjoyed by the sighted child. To learn it he must have from his parents and others more planning, more showing and more conscious effort. Wise use of words in terms of relating actions and things can increase language development and enable learning in several ways, simultaneously.

1. With regard to eating

   The Child:

   - requires night feeding, plus day; later, day feeding, only
   - recognizes bottle, increases

1. The infant with impaired vision needs to be helped to recognize his bottle. The repeating of a few similar words each time it is placed in his mouth or hands will encourage such recognition. He will be alerted by tone of voice and overall manner even though he does not yet understand the words. Placing his hands on the bottle will help him associate this touchable object with the milk that he is getting.

activity at sight of it; later, holds it

- puckers mouth for food
- feeds self toast, crackers (munches)
- rubs spoon and puts it to mouth for licking
- chews and swallows solid food
- attempts to feed self with spoon
- uses spoon, some spilling
- discriminates food from other objects
- can feed self well with spoon; begins to use fork
- can serve self
- likes to help choose the foods he eats
- can eat at family table without demanding too much attention
- uses knife for spreading
- uses appropriate table manners

With regard to drinking

The Child:

- drinks from cup
- holds cup, glass when drinking

It is extremely important that the visually impaired child be held by his mother (or "caring adult") while he takes the bottle. In this way, a warm relationship begins to develop and receiving of food is tied in with the relationship. If the child cannot see and is not held, a bottle has no source and may well seem to be coming out of the air. In most cases, the visually impaired child can learn to chew and can progress to solid foods just as can any child. It must be remembered, however, that he is not observing what others are doing and must be helped to take certain basic steps. As soon as the youngster begins to sit, finger foods should be placed on his tray where he can find them and pick them up. They can be put into his hand and exclamations made (hugs given, too) over his bringing them to his mouth. To learn use of the cup, the hands of the visually impaired youngster will need to be shown the cup empty first and then with a little liquid in it, so that he can explore it and get acquainted with it. Later, he will need to be shown, through another's hands over his, how to pick it up and lift it to his mouth, then how to place it again on a tray or other surface. The right time for using the spoon is determined by the youngster's ability to grasp and move it about in a more or less directed manner. At this time, he will have to be shown how to manage it, probably through another's hands placed over his helping him go through the necessary motions. This instruction, as is true of all things shown and taught, should be done a little at a time, in a relaxed, easy way. There is no need to put pressure on the young learner; it can do much harm. When he is tired or if his teacher is, a break is needed. Instruction can begin again later. It must be remembered that "messiness" is necessary to every child's learning. With the visually impaired child, this is even more true. He must be able to try out, to explore, to know in ways which make sense to him, chiefly through touching and feeling. Foods must be explored with fingers and must be looked at in their different states (raw, cooked, mashed, etc.) Otherwise, how can they be seen? Without vision guiding hand actions, so much more practice is needed

- drinks from cup, glass holding it himself (both hands, usually, some spilling)
- can hold small glass with one hand
- drinks from cup, glass without help; replaces it on table
- can get drink of water without help (can pour from small pitcher, can wipe up spilled liquids)

2. With regard to toilet habits

The Child:

- has increasingly more regular bowel movements
- begins to wait a reasonable time to be taken to bathroom
- tells when wet
- awakens at night, cries to be changed
- usually indicates toilet needs (rarely has accident re: bowels); usually dry at night if taken up at parents' bedtime
- makes definite effort to pull or push down unfastened panties

before the spoon finds the dish, the hand finds the cup. Preparations made in advance can keep situations controlled. Plastic covers, paper towels, old clothes under and around the youngster's eating area can hold in check what might otherwise become unbearable. This kind of advance action, coupled with the realization that mishaps and untidiness are fore-runners of developing "know how" can allow one to take pleasure in the child as he learns.

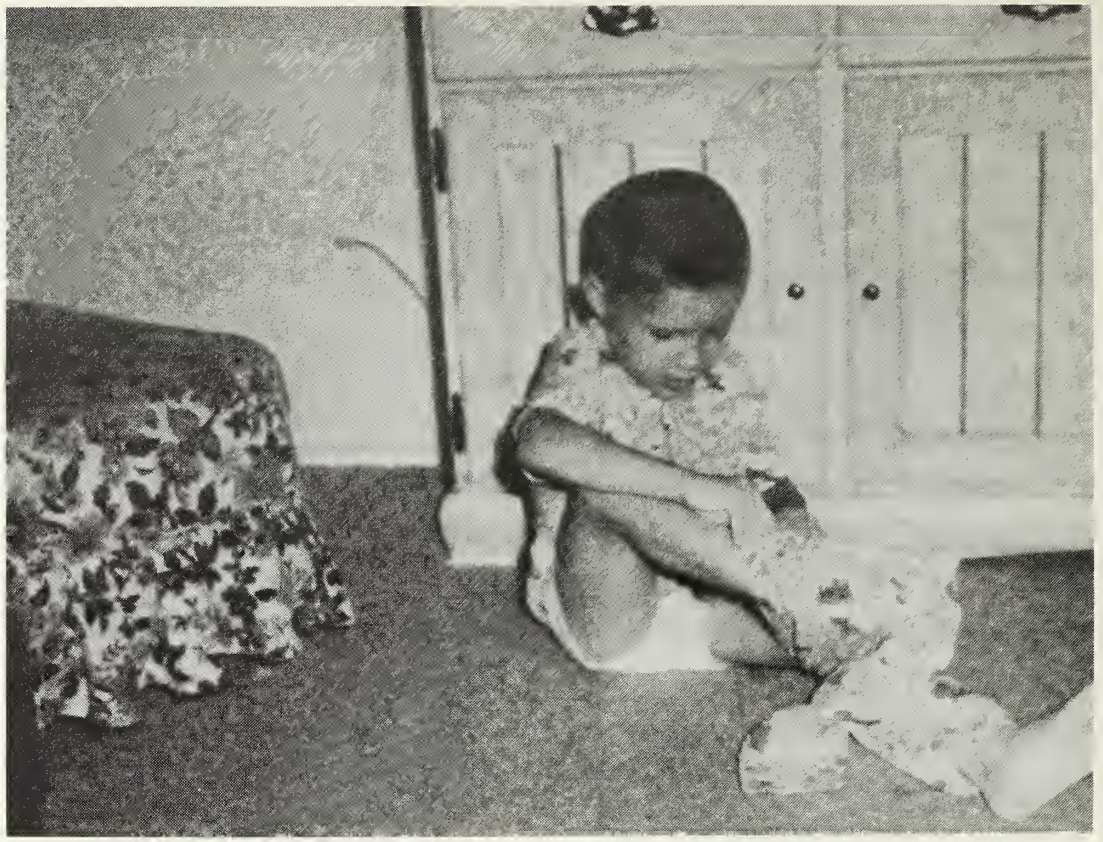
2. With regard to toilet habits, the child who is visually impaired will need much more chance to look with his hands at what is involved. He will need to see on what he is sitting, what he is wearing; his hands on another's can begin to notice undressing. Another's hands over his can show him how to help pull garments down, how to hold toilet paper for wiping purposes. There must be an awareness of such trouble spots as the toilet seat that is so high that a child feels suspended in space because his feet do not touch the floor when he is seated. Either a lower arrangement or a support under his feet and at the sides is called for in this instance. The time will probably come when the visually impaired child begins to investigate his bowel movements, or urine, through looking with his fingers. This is natural, since vision cannot let him know. A matter-of-fact response by the relating adult is essential. Allowing him to look for a short time, then explaining to him in a few words that these are things the body does not need as it uses food to help one grow, will give him the beginning understanding he needs. By the time his hands are washed, he will be ready for other interests.

- seldom has toilet accidents if reminded occasionally
- may go alone, though needing help with wiping after bowel movement
- is on his own in bathroom, though sometimes needs reminding to go
- can usually care for self if has to go to toilet during night

3. With regard to dressing

The Child:

- passively cooperates when being dressed
- makes it easier for someone to help him by holding still or by extending arm or leg
- pulls off socks, shoes as act of undressing
- actively cooperates in dressing
- can remove mittens, socks, hat, unfasten zippers
- actually assists in dressing, pulls on simple garments
- removes coat, simple garment,



3. The visually impaired child will need more motivation, encouragement and instruction than will the normally sighted child in learning how to dress himself. The caring adults' purposeful involvement of the child in taking off then putting on his clothes will awaken the youngster's interest. Adult hands on his, helping his hands take off a hat, socks, shoes, pull down panties, will give him his first notions of what to do. Putting on will come a little later but will improve from the same methods. Actions calling for smaller and more exact movements (unbuttoning, buttoning, unzipping, zipping) will come still later. They will require practice, first with very large buttons and zippers, then with increasingly smaller ones.

puts on shoes, unbuttons buttons

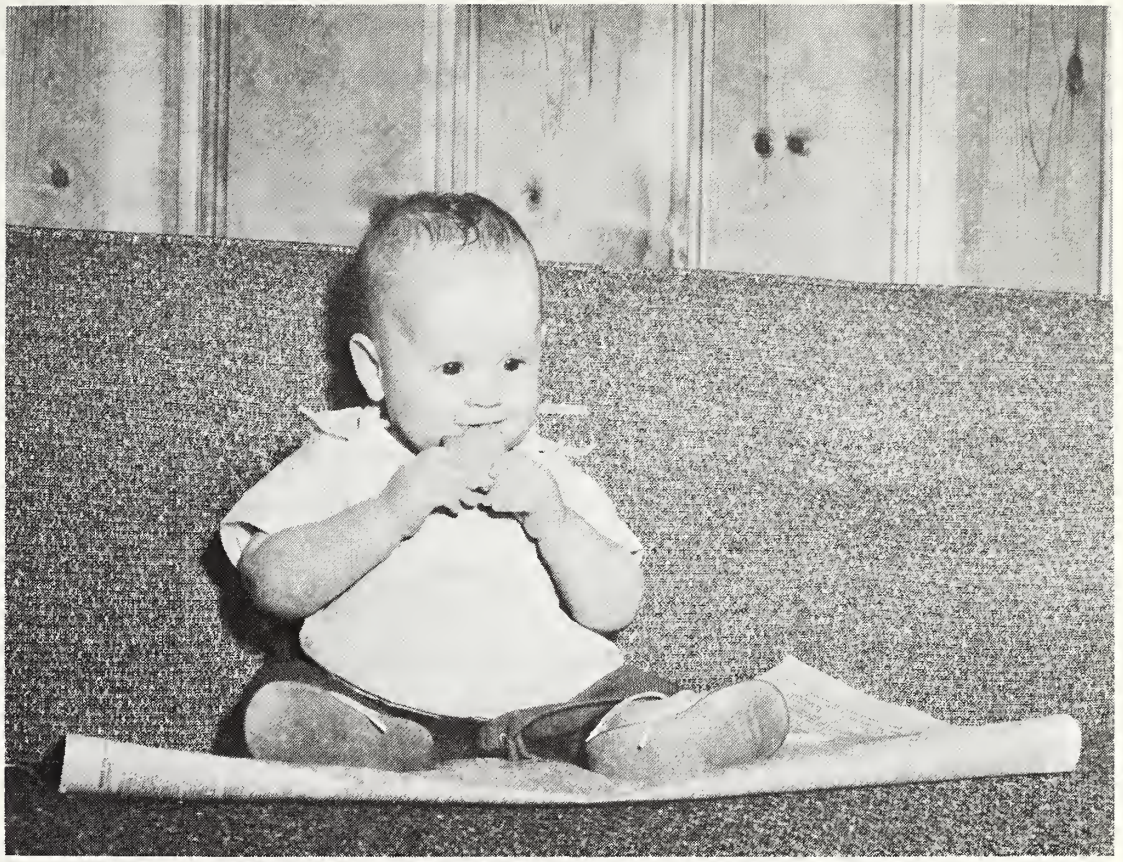
- can put on coat if given in right position
- distinguishes front from back of clothes
- can dress, undress with only a little help re: laying out clothes and difficult fastenings

- can lace shoes
- dresses, undresses without help
- is more conscious of own body; wants privacy
- ties shoelaces

4. With regard to washing

The Child:

- tries to wash hands
- can wash, dry hands (may need "touching up")
- dries own hands
- washes, dries face and hands, brushes teeth (with a little help)
- helps bathe self
- bathes on own



4. Washing ones self hands first, then face and later, one's whole body, is learned bit by bit, from the easier part to the harder. Superficial and limited cleanliness is accomplished first, the more complex skills are developed later. When hand washing is thought of, for example, it becomes evident that much is involved—water, soap, towel, soaping, rinsing and drying. The caring adult would help the youngster with the first main task of wetting hands and rubbing on soap. Spreading of the soap and rinsing and drying should usually be shown with the other's hands on the child's. Later, the dimensions of the task can be extended to drawing the water supply, finding and replacing soap and towel, etc.

5. With regard to sleeping

The Child:

- delays sleep by calling for drink or asking to go to bathroom
- may have complicated bedtime routine to delay getting to bed
- makes excuses to delay bedtime
- normally sleeps through night
- nightmares not uncommon, but child usually can tell what has bothered him
- can get ready for bed, but likes to have mother or other close adult near
- can go to bed alone, though likes to be tucked in and have a goodnight "chat"

5. Even though the visually impaired child may not be able to see light and dark, he will learn the cycle of day and night through the actions and words of his family. Sometimes it is feared that he will sleep too much. It has been found, however, that the child who has been helped to realize that his world is an interesting, cheerful place will want to be a part of it through the right schedule of awakeness and sleep whether he is visually impaired or not.

INTELLECTUAL GROWTH AND DEVELOPMENT

Studies indicate that children begin to develop a sense of purpose during earliest infancy. This sense of purpose is akin to the simplest kind of thinking; it is of the nature of response to a stimulus (to sound, sight, smell, touch, taste, movement). As boys and girls become older, the stimulus and response become directed toward abstract as well as concrete experiences.

More is known today than previously about how children learn, though much remains which we do not know. It now seems relatively certain that children learn:

- **through using all their** senses—(sometimes together—sometimes combined, two or more; usually one sense predominates)
- **by doing**—after a certain amount of watching others do
- **through language**—by hearing others talk about what they do, think, feel
- **through play**—giving chance to "act" as adults, using more muscles and solving more problems, becoming more social

through asking questions and investigating

- through doing increasingly complicated things—in terms of muscle use, emotional involvement, thought processes and with help and encouragement from adults who care

DIRECTIONS IN WHICH CHILDREN DEVELOP INTELLECTUALLY	COMMENTS SPECIFICALLY REGARDING THE VISUALLY IMPAIRED CHILD
1. LANGUAGE The Child: • makes small, throaty noises; turns head to sounds • gives social smile • laughs aloud • makes increased variety of sounds shows active interest in variety of sounds • listens to own voice • vocalizes when crying ("m-m-m") • "talks" to toys • initiates social approach vocally • copies sounds when hears them • combines syllables • pays attention to own name, to "no-no" • inhibits simple acts on command • can imitate some familiar words • begins to use several words meaningfully • makes positive response to command (will hand familiar object on request)	1. Language is even more important to the visually impaired child than to other children. After basic language has been attained, language can perhaps take over for vision in organizing into thought what the child has experienced, if the experiences are truly meaningful ones. As understanding of language develops, so does the ability to teach oneself through words and to think with words. Some parents are naturally more talkative than others. Visually impaired boys and girls have to hear speech or they are cut off from the world around them. If parents and others in a family are relatively quiet and relate more by gesture than by words they must make special efforts to talk more as their means of communication with the visually impaired youngster. At first, while the child is still an infant, the topic of conversation is not what is important. Rather, it is holding him, loving him and letting him hear a familiar voice. Later, he can be talked to about his experiences. Things and actions can be named for him as he encounters and/or does them. As his understanding and vocabulary grow, he will be increasingly able to follow directions, to do simple actions or to answer simple questions. Since the child with little or no vision cannot see how a person feels by the facial expression or by the posture, attitudes and conditions must be conveyed by words.

- chatters and babbles
- understands some language, often responds to such directions as "come here"
- can point to certain parts of body (ears, eyes, nose, etc.) and familiar objects in room
- listens to rhymes, songs, interesting sound repetitions for short periods
- begins to look selectively at picture books
- names ball and carries out two directions
- indicates needs or desires
- uses less nonverbal jargon
- has increasing vocabulary, begins to use pronouns ("me," "mine")
- uses two and three word sentences, to express an idea
- understands simple directions and requests
- converses with dolls and self (perhaps much jargon still)
- asks names of things
- listens to simple stories (especially

In this way, the child can begin to realize that words apply to more than just those things which can be touched and he can begin to understand what feelings are.

At first, almost any words will do in communicating verbally with the visually impaired child, since essentially, it is the warmth of expression that the child hears.

Rather quickly, however, the child will begin to actually understand the words, and at this point, it is important that words be chosen to relate precisely to actual experiences and actions. For example, lap games not only have the value of physical contact between parents and child, they introduce words related to objects and actions. "Patty-cake" and "This Little Pig" are good examples. Games involving touching and naming body parts are excellent. Other games similar in principle can be invented to serve a particular learning need. Talking about experiences as they occur is essential. Comments regarding feelings, attitudes, facial expressions are important, if made in manner suited to the child concerned. Talking about a toy (how it feels, looks, sounds, smells, and what it does) will have a like effect. Verbally describing actions as the child is bathed or as he begins to wash his own hands, makes such experiences more helpful to him.

Frequently people wonder if they should use words usually thought of in relation to vision in the presence of their child. Words such as <u>see</u> and <u>look</u> are common words for most people and should certainly be freely used. As the child becomes older he will need to be told that people <u>see</u> and <u>look</u> in different ways; some using their

likes those familiar)

- uses names of familiar objects
- talks in short sentences, uses plurals, past tense, prepositions, personal pronouns
- refers to self as "I," can give/identify sex and knows own name
- obeys two prepositional commands
- gives action in picture books
- uses language easily to tell story or to relate an idea, feeling, desire, or problems
- listens, and can be reasoned with verbally
- is capable of speech understandable by family and by those outside
- names one or more colors correctly
- obeys five prepositional commands
- asks endless questions
- speaks of imaginary conditions
- often mixes fact and fantasy
- calls names, brags

hands and fingers, others using their eyes. The words such as blind and visually impaired should be used if they are used accurately. If a youngster has some sight, he is not blind but visually impaired.

The real world of many visually impaired children is at first only as far as their arms and hands can reach. The sighted infant "talks" to the toy which he sees, though it may be lying or hanging well beyond his reach. The visually impaired youngster may not be aware that a toy is nearby, unless it is within arm's reach and he touches it. This is sufficient reason for placing a variety of toys within easy finding range and for teaching the child to explore the surrounding area in order to see what is there.

If visually impaired boys and girls have some vision, it is important to find out in what ways it can be made useful in learning. If the child can see colors, he should learn colors; if he can see pictures in books, he should be helped in learning to recognize what the pictures show (starting with the very simplest and clearest illustration). Should he have very little or no useful vision, simple books can be made which will stimulate his interest. The books, at first, would have only two or three pages with covers formed from corrugated boxes. On each page could be fastened a real object interesting to the touch (block, cotton, mitten). As the youngster matures, these homemade books can become a little more elaborate.

Words may be used to teach arithmetic ideas but the child's verbal instruction must

- increases vocabulary though words may be misused
- asks questions about meanings
- knows four colors
- carries out three directions
- tells a long familiar story
- can count as many as four items
- understands some abstract words
- likes to be read to, likes to look at books
- interested in numbers
- uses connecting words such as ''and'' to make longer sentences
- aware of mistakes in others' speech
- apt to use slang
- can use telephone
- understands seasons of year and basic time intervals
- can recognize pennies, nickels, dimes
- can tell how two similar objects differ
- can count meaningfully above 10
- can write or print own name and a few other words

be accompanied by the experience of actually counting real objects. Awareness of how many hands and feet can come first; then, how many fingers on one hand or how many thumbs. Later will come the counting of chairs, toys and so on.

Skills having to do with such objects as money and the telephone can be taught when the child has good finger control as well as the awareness of what these objects are and how they are used. Repeated demonstrations of their use will accelerate the learning process.

- is beginning to distinguish left from right on himself but not yet on others

2. FINE MOTOR (HAND/EYE—HAND/EAR/EYE) COORDINATION

The Child:

- can fist hands, clench on contact
- immediately drops toys put into hands
- regards objects in line of vision only, follows object to midline of body
- listens to bell by reducing general activity
- engages hands at midline
- can follow with eyes a slowly moving object
- can activate arms at sight of dangling toy
- uses two-hand approach to objects, scratches, clutches
- grasps with palms, holds small objects
- regards toy in hand, takes it to mouth
- looks from hand to object when sitting
- attempts to regain lost object

2. If a child has no vision, hand and eye do not work together. Instead, the ear and hand must learn to function as a team. This coordination can be achieved but only through much experience and at a later time in a child's development than eye/hand coordination.

Whatever vision the child has should be used to best advantage, and may be enough to enable him to develop eye/hand working together in certain situations and at certain distances.

Of great importance to the child's learning is his relationship with a caring adult and the amount of time and interest they share. The visually impaired child, even more than most, needs conscious help during the early development period. He needs to be stimulated in ways of observing, especially through sounds, feels, odors, movement.

The visually impaired youngster has to learn to become curious about the world around him. Toys placed around him in his bed, a play table at which he can sit and on which are a few interesting objects, the play pen with its contents all serve this purpose. From the first time the child holds and shakes a rattle and is aware of

- uses one hand approach to grasp toy
- reaches for nearby object
- rakes at small pellet with whole hand
- bangs, shakes, plays with object
- transfers toy from one hand to other
- capable of crude release of toy
- turns head toward special sound
- can amuse self, keep busy, fifteen minutes or so
- shows preference in materials
- seizes and spontaneously rings bell
- voluntarily releases object
- uses index finger approach, then grasps with thumb and finger
- examines toys and objects with eyes and hands
- likes to put objects in and out of container
- plays serially with objects
- tries to build tower of two cubes
- purposefully moves toys from one place to another
- shows definite interest in working movable parts of objects

the connection between the shaking motion and the resulting sound, he begins to develop ear/hand coordination. The more this coordination is developed, the more the child will be able to advance from simple to fuller use of toys and from this point to far more complex operations such as the proper eating of finger foods, the use of simple musical instruments, etc.

It has been said that visually impaired children need definite helps in learning to control their head position, to bring their hands together at the middle of the body, to clasp the hands and to play with the fingers while the hands are together ("mutual fingering"). To help the child gain these abilities, certain techniques are of value. For example, the head turned toward certain distinct sounds may enable the child in better focusing attention; the child's hands placed on the bottle given to him, while an explanation is made of what is being done may help him incorporate these actions in his own repertoire. The child who is helped to look for dropped objects and is encouraged to play "lap games" with the caring adult learns in numerous ways.

People with much experience in this area say that visually impaired children will use the mouth to explore objects to about the same extent as most children if they have had sufficient experience involving touching and feeling. The use of the mouth is a good early way by which children get to know certain characteristics of whatever is being explored. As children grow older, the feel of an object, the way it affects muscles, its smell and sound, and its action influence the interest in it. Since visually impaired children have their interest in objects generated primarily by

- takes circle out of, then, puts it into a form board
- likes picture books
- plays with blocks in simple manner
- imitates simple things he sees others do
- puts pellets into bottle
- makes tower of two cubes
- puts six cubes in and out of cup
- begins to imitate a stroke and scribbles spontaneously
- turns book pages, several at a time, then singly
- puts together a three-piece peg toy
- makes tower of three to four cubes
- dumps pellets from bottle
- can work three-piece formboard
- imitates pushing train
- likes to investigate and play with small objects such as pebbles, large objects which can be pushed or in which things can be carried
- likes to play with messy materials, such as clay

non-visual means relevant means of exploration must be strongly encouraged to enable them to more fully experience the world.

The child who is visually impaired will begin to show preference for certain toys and other objects as he continues to have experiences which broaden his knowledge of them. Certain things will feel better or more interesting, others may sound, or smell, or do actions in ways that have special appeal . This does not mean that children should not be introduced to new objects, or that they cannot be helped to discover new ways to use old objects. But a mixture of old and new will be the happiest one.

Real objects have to have meaning to the visually impaired child over a period of time before the same objects, in replica and miniature, have meaning. A boy or girl will need many experiences with a real car, for example, before the tiny object held in one hand can be meaningfully called "car."

This point applies to certain kinds of creative expression, as well as activities involving constructing and building. The visually impaired child will need to have many experiences with a ball or with a block or wagon, before he can take clay and shape a ball, block, wagon, capturing their chief features. He can enjoy shapes (beginning with circle and square) through the material they're made of, their odor, the sound they make when dropped, whether or not they roll, etc. Later, comes the

- can snip awkwardly with scissors
- imitates everyday household activities such as cooking, hanging clothes
- engages in block play, fills wagons, lines them up
- builds towers of six to seven cubes
- imitates vertical, circular strokes
- fetches and carries familiar objects
- holds crayon with fingers
- is beginning to prefer use of one hand over the other
- can build three-cube bridge
- names own drawing
- copies circle, tries cross, is more aware of similarities and differences
- is beginning to match some colors
- explores objects of various textures
- begins to arrange objects by a plan
- pushes trains, cars, in make-believe activities
- cuts with scissors
- sometimes attempts to draw simple figures

idea of roundness and squareness. Next comes the ability to fit these pieces into the formboard. Still later the child develops a growing understanding that other things are round and square, too. Blocks may not be used for building a house, a town, a street, but may be very much enjoyed for the fun of balancing them, for their feel, for the sound they make when they are banged or fall, or as objects to be counted and carried.

All youngsters hear about chalk, crayons and paint and should experience their use. These materials can be pleasurable and interesting to visually impaired children if the emphasis is on getting to know the materials and appreciating them through the muscle movement involved, the feel, and the associated smells. When paints dry, they can be felt. Crayon traces give different feel to the paper. Corrugated paper "stencils" (circles, squares, hearts) can be stapled to paper, then colored and cut around, or colored in. When stencil and paper are separated, the crayon traces left are interesting to the fingers and if the stencil is simple enough the shape can be recognized by touching.

- makes playhouse for dolls
- begins to make simple forms with clay
- draws man with two parts
- can trace along a line fairly well
- copies cross
- counts three objects, correctly, pointing
- makes five-cube gate
- makes forms which look somewhat as intended
- builds house with blocks
- uses pencils and crayons freely, makes simple drawings, usually recognizable
- enjoys cutting with scissors
- makes two steps with cubes
- draws unmistakable man
- colors circle with some idea of staying within lines
- copies triangle
- counts ten objects correctly
- can learn to play simple games
- develops differential (boy, girl) play interests
- likes to create and make things with hands

- begins to use simple tools with help
- builds three steps with blocks
- draws man with neck, hands, clothes
- copies diamond

Children who see can learn, over time and with much practice, to notice visually as well as in other ways how things are different and alike. They begin to group things and persons in numerous ways. They learn that a sock is to wear, that it may be of different weights and feels, that it is made of different materials, that it is a kind of clothing, and more. They learn about shapes: how they look in terms of size, color, form; that they appear by themselves, or are parts of many other objects; that they can serve special purposes. Visually impaired children learn in many of these directions, too. They will depend, however, primarily on touch, smell, sound and movement to discover how things look, differences, likenesses, what things do and how they should be placed in the mind for good use, as needed.

The sighted child, after seeing and playing with a circle, for instance, and after using his arms and fingers until he can manage a crayon well, will begin to draw circles or a stick figure with increasing skill. His eye/hand "working together" improves through use and this is only one example. Eye/hand coordination is of special importance because of its relationship to later writing and reading. The boy or girl who does not see must be helped to develop ear/hand teamwork and the use of hands and fingers, as well. These things call for much active interest on the part of the adults around the child. The child needs to be shown how to use his hands and what to do so that his fingers learn to work correctly. He needs to be helped to relate sounds with their causes. Only through much practice and effort can a visually impaired child reach the degree of skill comparable to that of the sighted child. He can reach it, however, if he has no other major learning problems, and if he is helped to do so.

If a given youngster's vision is useful but not good, the coordinated use of eyes and hands or ears and hands, or all three, will have to be worked out by him and the adults concerned with him. In certain activities and with certain things his vision may be very helpful. In other situations it may not be.

EMOTIONAL GROWTH AND DEVELOPMENT

As the child develops physically, personally/socially, and intellectually, he also grows emotionally. The way he feels about his world and the people and things in it, and the way his world feels about him, will determine to a great extent how he functions as a person. As with the other developmental areas, the earliest years are crucial to the child's emotional life.

One vital point to consider is that the child affects and

influences the parents and caring adults just as they affect and influence the child. When parents first learn that their youngster is visually impaired, it is very probably traumatic news to them. Their early thoughts may be that their youngster is "imperfect," that he cannot learn, that he will be dependent all his life, that he will miss many of life's joys and beauties. They may feel so much the lack of visual contact and response that the joy usually stemming from varied kinds of contacts with one's child is curtailed. Parents and others who have such feelings must be helped to realize (from their own experiences, from literature on the subject, through professional consultation, etc.) that their youngster is a person with abilities which can and must be developed and with capacity for feeling and thought. The caring adults must help the child and themselves achieve a rich interrelationship. Through this interrelationship, the child's personal/emotional development is supported and enhanced.

One of the first needs of children is a feeling of safety and security with their families and with objects in their world. This feeling comes as they respond to being loved, to being held, to being talked with, played with, and encouraged. They very much need a firm discipline which allows them to do what they are ready to do, guides them where they need guidance and gives them rules to live by. They do much better when shown and told what to do rather than what not to do. Children also need to be helped to be increasingly capable of doing for themselves and others. It is necessary, for the child who is visually impaired, to understand that there are certain things with which he will always need assistance (from the viewpoint of safety, best use of time and common sense). This is simply a realistic approach to life. Children need to learn to be independent to the best of their abilities, but not beyond the bounds of good sense. None of us likes to feel inadequate and unable to do things on our own; but, no adult or child needs to attach any value to unreasonable challenges or cocky disregard for sensible cautions. Of course, "unreasonable challenge" should not be equated with avoidance of frustration. Those who know most about learning believe that "just enough" frustration makes the child want to try the new, the different and the more complicated. Children need the freedom to make mistakes and they need the guidance to learn from those mistakes. It is imperative that all their frustrations be set against reasonable goals and that they feel supported, understood, and wisely guided by those who mean the most to them. When the support and understanding are there the child can tolerate frustration without fear and will be inspired to attempt those learning adventures to which he is exposed.

One more point must be stressed. In general, children do and give (perform) as those who are around them expect that they shall do and give (perform). Certainly, this does not mean that the child without sight can see visually, or that the child with one leg can walk as if he had two, just because it is expected or wished. It does mean, however, that if adults determine to learn all

possible about a given youngster and determine to think of ways to show and to teach him, that child can do far better than he would do if the visual impairment were allowed to be an arbitrary barrier to development and learning.

To repeat, as those who are close to the child think of him, so does he quickly learn to think of himself.

GENERAL DIRECTION IN WHICH CHILDREN DEVELOP EMOTIONALLY

Please note that the sequences which follow are arranged differently from the previous ones. Children are thought to develop emotionally more or less in the continuous order presented.

1.-2. Total egocentrism at birth slowly expands into awareness of environment and of other persons. It is essential that the child develop a growing sense of trust in his world during his early months and first years. This must begin through his relationships with his mother or other adult who cares for him. With this support, the two together can work out the frustrations the young child must experience in order for learning and growth to occur. The mother's care of the child will greatly depend on the supports she receives from the others in the family, especially that of the father.

The Child:

- wants and needs physical comfort
- needs consistent behavior of the caring person
- has hungry cry

COMMENTS SPECIFICALLY REGARDING VISUALLY IMPAIRED CHILDREN

1. The baby who is visually impaired can and must feel and hear the love of others for him, whether he can see it or not. While his ability to look at others may be very much missed, his feelings are very much present. As those in his family, or others near him, become increasingly sensitive to his many other ways of responding, so will their interaction become more meaningful.

2. If a baby is premature and has to spend time in the hospital in an incubator, with little or no picking up and touching allowed, he may have to be taught to like to be held. He may, at first, show real displeasure, but it is essential that he learn early the joy of a close relationship so that he can develop the first understanding of "me"/"you" and "me"/"objects in the world around me."

- has startled response
- crys, much or all of which is tearless
- begins differential crying for different causes (hunger, before sleep, pain), vocalizes happily, smiles, laughs aloud, shows recognition of familiar faces
- responds to facial expressions
- has reduced amount of crying, though often cries when caring person leaves room
- cries easily on seemingly slight provocation (change of position, removal of play object, unusual sounds)
- plays contentedly alone
- thrashes arms, legs when frustrated
- imitates facial expressions and gestures
- shows fear of, or shyness with, strangers, shows increasing affection for family group
- shows emotional changeability by easy and quick changes from crying to laughing
- seeks attention through noise-making, squealing, and so on
- begins to vary behavior according to emotional reactions of others
- enjoys simple tricks and games
- cries more often in association with irritation or minor frustrations; stiffens in resistance; may have "tantrum" if things go wrong
- is aware of other children, interested in them, but does not play with them
- begins to claim certain things as his own

3.-6. Increasingly, the child learns that his behavior is his own, as he develops physically, neurologically, socially. He becomes ever more able to exert controls. He grows in the desire to explore his world, to learn to do and accomplish, to learn to ask for and give helps of various kinds. He begins to realize that self-control can be developed without loss of self-esteem and he begins to understand that inability in one area does not make him unable in all areas. At this stage in life, even more than others, he needs a firm discipline, which anticipates and keeps him from situations which are beyond his coping powers. He needs to attain his individuality gradually, with parental firmness protecting him from choices, decisions, tasks and understandings which he is not yet ready to handle.

The Child:

- shows improved emotional equilibrium
- has decreased number of violent emotional reactions
- uses voice tone symbolically
- takes pride in accomplishment of motor skills
- can be coy in actions and facial expressions

3. As visually impaired children develop, they are open more and more to certain "common dangers" and possibilities of hurt (physical and psychological). These will have to be pointed out with even more care than would be true for normal children. Limits can and must be set as to what each can and cannot do, where each can and cannot go, but with words and actions which make sense to that child. For example, a child can learn that he cannot throw a ball in the house but can roll it. He can learn that when a stove is hot it is not to be touched, but approached carefully. Detecting temperature changes, odors, and the sounds made in cooking can be learned. In learning not to play in the street, the visually impaired child will need to learn how to see where yard stops and street begins. Not running in the house, fully closing and opening all doors to avoid needless bumps are safety measures which he can learn.

4. The child's feelings about himself increasingly are based on his realization of what he can do and on what he hears other people say he can do. It is even more essential for the visually impaired child than it is for other children that he learn how to take care of his bodily needs, that he carry his share with regard to household responsibilities. Once he and his parents, then the others in his family and the neighborhood, begin to see the things he can learn through careful and patient teaching, more and more such things will be discovered.

- has fears which are mainly auditory
- may fear parents' leaving
- plays near other children, but not cooperatively as yet
- seeks adult praise
- begins to enjoy cooperative and group play
- is more independent and less tearful than earlier
- is ritualistic in many activities (in dressing, arranging toys, going to bed)
- is friendly and desires to please, may be jealous of siblings
- laughs while playing with humor related to both gross activity and verbal play
- has increasing emotional control
- has fewer fears than before and now mainly visual (concerning the grotesque, the dark, animals)
- likes to have household responsibilities
- is becoming aware of common dangers and how to avoid, react to them

7.-9. As the child becomes surer of himself and is increasingly able to trust himself and others in the world around him, he also increases in numerous ways. His contacts with, and understanding of his environment through developing language, mobility, interaction with children and adults, perceptual abilities, much play, assuming responsibilities in

5. More than other children, the child who is visually impaired will need places he can call his own: a place for his coat and hat, a place for keeping other clothes, a place for toys, his own bed, etc. This is particularly important for him, so that he can find things by himself, take responsibility for putting things away, and begin to get a feeling of order, of what to expect in his world. He also develops this feeling of order, of what to expect, through the actions and attitudes of the adults with him and the rules by which they expect him to live.

6. The love and respect for one another which give any family member strength and support do the same for the visually impaired child. The discipline which gives him limits to live within, yet allows him the freedom he is ready to handle, is the same kind of discipline important for anyone in the family. The visually impaired child will develop as a whole person through this love, respect and discipline joined with the understanding of those things in life most meaningful to him.

7. As was said before, the visually impaired child's awareness of other children and his increasing contacts with them must be encouraged. Particularly is this so if he is an only child. Much desire to get acquainted with others, to be with others, to play with others develops from one's observing the personal and social activities of others. The resulting contacts are

the family structure are examples. He furthers his emotional control and begins to develop his own conscience, which will slowly but steadily take over increasingly for the adults who controlled and guided the behavior of the young child.

The Child:

- plays on cooperative level with other children
- is somewhat argumentative but often uses argument as play and in a desire to experience use of new words and new actions
- may be selfish, impatient
- is proud of accomplishments
- has boisterous humor which is also exaggerated
- likes to show off
- tattles often
- may boast
- is aggressive physically, as well as verbally
- can be rough and careless with toys
- continues to fear (much the same) but now enjoys being mildly "frightened" in play with adults
- has strong feeling of "me," "mine," and "I" and of home and family
- begins to distinguish self from others and to recognize other people as entities
- exhibits brief and superficial self-criticism
- has more appropriate perceptions of reality

usually made. The visually impaired child has to learn, first, how to be aware of the presence of another person. Bringing him "in touch" with other children and telling him about them will give him a good start. Useful thoughts in this area concern the value of the child's learning to shake hands, and to turn his head in the direction of those with whom there is contact. A handshake can give the child a "feel" for the person he is meeting. Whether child or adult, this is a sound beginning for getting acquainted. Turning the head toward the person who is speaking gives the youngster better hearing and a social reaction which indicates that attention is being given.

8. When the youngster with a visual impairment is old enough to understand that people "see" in different ways, his visual situation should be explained to him, to his satisfaction and current need. The story about the parent whose child asked where he came from can be a guide. The parent in this classic, thinking at last the time had come for sharing with his child the facts of life, went into great details on this subject. After long minutes the "lesson" was over. The child drew a deep breath and said with some bewilderment, that he had only wanted to know where he had been born. This may very well be the visually impaired child's situation when the question of "seeing" first comes up. Those who are with him and know him best should try to base their answers on where they think he is in his understanding and should word them accordingly.

- demonstrates that his world is widening and his senses functioning better, is more mobile, more social and increasingly independent, uses language more and has more language
- is increasingly developing own conscience rather than relying only on parent for conduct guides
- is becoming aware of sex differences
- shows more interest in peers and peer play
- seeks and finds own friends
- feels increasingly responsible for self and younger children (though may feel somewhat torn by mixed desires for independence-dependence)
- is increasingly eager to do for self and to accomplish
- may respond negatively to pressure, may sulk or be rude
- may use slang or profanity
- is more sensitive to other people especially to parents' reactions

9. It has been said that parents have to be a better team than ever before when one of the family has a major impairment. Teamwork is essential to any such group and should include the children, too. But there will be even more to think through, and coordinate, when a special challenge such as visual impairment is in the family midst. Unknowns, doubts, frustrations, and griefs can resolve themselves with time and effort. The whole family must be involved, however, and in a constructive way, in order for this to come about.

The point in a child's life at which he is considered ready for school is generally anticipated with pleasure. If the adults around the child express positive thoughts about school days, it is probable that the youngster will look forward to school's beginning. Regardless of when a boy or girl starts to school, however, and in which kind of program success with school and school-centered living will depend on a number of things. Every child will need certain attitudes, ways of work and capabilities and skills. Among these are the abilities:

- to use the large muscles well
- to listen carefully
- to follow instructions and requests, understand words designating placement and direction
- to move about on one's own
- to work in a left-to-right manner
- to tell which things are alike and which are different with regard to sounds, shapes and textures
- to use words meaningfully
- to take care of personal needs
- to put the small muscles to good use

Also necessary are emotional and social traits. Among these are the capacities:

- to feel good about oneself
- to enjoy what one does
- to work with others
- to take one's turn
- to work on one's own
- to stick to a given task for increasing periods of time
- to try new things willingly

Children who have attained the attitudes, capabilities and skills already mentioned are well on their way to a full and good involvement in school-life.

Reading Readiness

Because this is a reading-centered society, mention of school readiness brings deep concern about the visually impaired child's learning to read. The child with a visual impairment may become a reader of braille (which means he will use his fingers to read small raised dots) or he may become a reader of print. The ability to use one's fingers well, as is necessary for braille reading, is helped through practice. This entails first, doing things with the whole body, then with the arms and hands and large muscles, and later doing finer things which strengthen the fingers and make them more flexible and sensitive. The child with enough vision to see large print needs physical activities, too, to

become "ready to read." He also needs to develop a satisfactory degree of eye/hand coordination.

Some children may, indeed, never learn to read. This is especially true in the cases of youngsters with problems in addition to visual ones. However, there are very few children with problems so severe that they can learn nothing. Those things to learn beyond the academic include: leisure-time activities, hobbies, exercises, self-care and household skills, positive attitudes toward self and others. The particular challenge lies in finding the best, or better, ways by which these children can progress. They can be helped to do much more than was traditionally believed, if, in the beginning, their strengths and areas of possible improvements are identified and utilized. For these youngsters, many of the skills and abilities necessary for reading can be and should be developed even though actual reading may never be achieved. All the things which are considered to be necessary for reading are usually favorable to and necessary for helping the child to live a healthful and happy life.

Learning Programs

Generally, it is felt that every impaired child can learn something; therefore, an educational program should be planned for each one. There was a time, not long ago, when most children with impairments (particularly auditory, visual, emotional, intellectual, and those pertaining to cerebral palsy) either had no school to attend, or automatically went to the one school in their state which was prepared to enroll them, the residential facility. In all states now there are several possible choices regarding schooling for most children with special needs. We have only begun, however, to meet the challenge of providing sufficient and varied enough programs to really serve the needs, locally and regionally, of all our children. Frequently helps are offered too late. The most effective programs provide consultative services to parents from the time the child is first known to have an impairment.

With regard to nursery school and kindergarten, the child who is visually impaired can usually participate in existing programs with few special provisions needed. A sensitive teacher, knowledgeable in child development and learning is a special requisite, as should be the case for all children. For older youngsters, many states offer classes within day school settings which provide special programs for the child who needs them. Some schools afford special help to impaired children but enroll them in the "regular" classes for as much of their schooling as their knowledge and development will allow. Residential schools still serve children in a number of states and meet special needs and give unique services. Their roles are changing, however, as their increasing concern with multiple-handicapped children are being recognized and expanded. There are other programs, too; the kinds, their purposes and their quality vary in the different

states. In order to know just what will be available for a specific child, the appropriate state department of education should be written while the child is still an infant.

The child who is ready for school has passed along certain developmental steps in growth and in learning. When a child has not accomplished the "expected" by the time he has reached the actual school age, there are several things which can happen. First, the school concerned may ask that the parents keep the child at home in order to give him more opportunity to learn in an individual setting. In this case, help must be given to parents so that they can know how best to proceed. Home education is generally felt most appropriate when the child has much to learn in every area Second, the school may admit the child, carefully note where he is in each area of his development, then plan his program in such a way that he is helped to mature in each area as he needs this help. Whatever the case, the same developmental steps are still of importance.

"School programs" as well as "home programs" must share the responsibility and opportunity for educating the whole child and from earliest infancy for best results. Present knowledge shows that the child's best and most open learning years are from infancy until age six. Recent federal legislation (Public Law 90-538, "Handicapped Children's Early Education Assistance Act") supports this point of view. Office of Education funds are being made available to teach pre-schoolers by means of television. States are beginning to concern themselves with the education of children as young as three years old. Illinois, for example, has mandatory legislation making available educational programs for children between the ages of three and twenty-one who have hearing, visual, physical and multiple impairments.

Those who are teachers need to observe and learn from children and to be aware of their uniquenesses just as do parents. When a youngster enters school, the program must allow the teacher to get to know the child as a whole person and must determine how and at what levels he is functioning. Growth and development sequences and general knowledge regarding how children learn provide guidelines for teachers in choosing goals for each youngster as well as the activities and materials which will allow those goals to be reached. Children's needs will vary. One child may need help in learning to move about. Another may be extremely limited in word-use and word-meaning. A third may not feed himself adequately. A fourth may have poor hand use and strong emotional needs. A fifth may have a combination of all needs.

Helping each child live more fully and increasingly achieve the goals set by the school and society is a requirement of the first school years. This makes necessary a highly individualized curriculum content which covers extensively all developmental areas considered important. The use of "educational materials" which match, as nearly as possible, the developmental needs of

the child is indicated. Up to the point of beginning reading the same sorts, and in many cases the same specific kinds, of material will be suitable for home as well as school use.

Children born with one handicapping condition frequently have others. Figures reveal that this may be true of at least one-third of those who have, at birth, one major impairment. It is becoming less common to find children who are visually impaired **only**. For example, children whose mothers had rubella during pregnancy may have been inflicted with cardiac and/or hearing loss as well as visual problems.

Multiple-handicapped children are most difficult to categorize and describe. Their strengths and lacks are highly individual but the term "multiple-handicapped" gives no clue to the strengths and weaknesses. Periodic evaluations for each child by knowledgeable professional persons and detailed programs of carefully sequenced learning are essential. Child evaluation centers and direct service programs for such children and their families are slowly evolving but do not yet meet the increasing needs. An expanding body of literature reflects growing concern and understanding.

The early years which are so important for all children are crucial for those who are multiple-handicapped. These children must be given the best professional evaluation and direct service from the moment they are known. However, they must be stimulated, encouraged and taught until professional help is available. A feeling for children, for how they learn, for what they want to do, for what their needs are will carry those who work with them a long way in encouraging their development. A young mother with little formal academic background was having great success in rearing her four year old, severely multiple-handicapped son. According to some her success was remarkable. Actually, it was the result of her insights. Her approach with her son revealed the understanding that is the essence of good teaching. She simply recognized that, with his multiple problems, her son would certainly be functioning as retarded. She also recognized that he could learn if he could be helped to do so in simple, logically sequential steps. She stated that she looked at her son in terms of the major learning areas (i.e., self-care, mobility, hand-use), noticed what he was doing already, then thought of what he could be expected to do next, with her help. The result was that her son was progressing in a way few would have dreamed possible.

Many multiple-handicapped children spend an undue amount of time during their early years in hospitals. For any child this can mean hours of loneliness and little to do even with well-

intentioned caring adults. Hospitalization may mean that the multiple-handicapped child will be even more alone and probably further isolated because of limited sensory-intake means and limited speech. For this youngster to be unstimulated for long periods of time, away from familiar surroundings, often with little or no understanding of the "why" does real damage to an already damaged being. Hospital stays should be considered only when absolutely necessary, should be planned for in advance, and made as interesting and enjoyable as possible. New situations, unfamiliar people and the relative lack of things to do can have cumulative, traumatic effect, particularly on multiple-handicapped children.

Another problem to which these children are highly susceptible is that of medication which, even though appropriate when originally prescribed, has become excessive or too prolonged in use. For example, the "drug approach" is less necessary as educationally oriented programs (aimed at the "whole child") become available and reach children at their various functioning levels. Children who are placed on medication for one reason or another must be re-examined regularly to determine whether their prescriptions are the most desirable and effective. Growing knowledge of medicines, drugs, and related treatment lead to continuous refinement and selective use.

It is encouraging to note that for children with severe auditory and visual handicaps (often called "deaf/blind") a massive effort in evaluation and education is now underway. A network of regional centers (comprehensive service systems) for these purposes is being established throughout the country with federal funds and interest supporting it. Pertinent information can be obtained from concerned local sources, state departments of education and the United States Office of Education (Bureau for the Education of the Handicapped). The continuing central effort must be to find early, evaluate accurately, and serve effectively ALL children with any kind of special need.

Educational Materials

Although much of the following has been said, it is appropriate to consider in this particular context certain major points regarding educational materials. Such materials will be found in many homes in the form of household objects. Among those conducive to learning are pots, pans and other kitchen utensils, old blankets and linens, wood scraps, hammers and large nails, and backyard features such as mud, sand and dirt. These environmental materials are in great part adequate for all children during the first years of life. Until a child is functioning at about a two year old level there is little reason to purchase toys or play items for him.

The selection of a suitable material for a given boy or girl should be based on that child's developmental level and will have to take into consideration what his own household has on hand or is able to provide. As the child matures and has a broad number of experiences behind him, he will develop preferences and will do an increasing amount of selecting from choices already familiar to him.

When shopping for materials for a visually impaired child one should seek items which allow the youngster a full-use experience. Items should be considered in terms of weight, texture, sound, movement, appearance and possible purposes. If a child has some useful vision, visual aspects will need to be considered. Certain features of a material, such as glare, may have to be guarded against. There will be things to buy which can be changed, in one or several ways, and then will be of increased meaning for a youngster with visual limitations. For example, a textured surface glued onto the original surface of a toy might make it much more interesting to seeing fingers.

As a general rule, a child will benefit most from having a few well-selected toys, each of which offers a definitely different learning experience. Particularly at first, a child should be able to thoroughly explore each toy or other material received and should have the chance to use each a number of times. A place should be set aside for the child's toys so that he can get them as wanted. This he should be encouraged to do increasingly as he matures.

The visually impaired youngster can begin to learn early that certain places in the house and yard are for play and work, while certain other places are not. He can learn how and where

to put things away. A feeling of being a contributing member can begin in this seemingly small, but highly important way.

When a child is first introduced to a given toy or other object, it should be shown him by putting it in his hands and helping him look at its different features. Just passing a hand over a surface is not enough. If the object is hand size, it should be held by the child to allow him to feel its lightness or heaviness. It should be felt for textural characteristics with the inside surface of the palm, thumb and fingers. It should be looked at more closely with the thumb and fingers of one or both hands. It could be smelled, examined for movable parts, looked at, visually if appropriate, in terms of purposes to be accomplished. The younger child will even explore for taste and for the feel of a material to his lips, tongue and teeth. If the object looked at is larger than hand size, it can still be seen through use of the above approaches, but more time and contact may be necessary to view it as a whole. In general, a look at the whole object with hands and fingers, followed by a more thorough look at separate parts, then another overview will be a good beginning for many. The visually impaired child, especially at first, will need to be shown how to look at things. As he develops, he will become more able to do this meaningfully on his own; he will learn to make certain modifications to meet his own needs.

In introducing the visually impaired youngster to an object, appropriate words should be used along with the physical demonstration. Words, chosen to clearly say what the youngster can understand, will teach the child about the task in hand as well as contribute to the development of his vocabulary. They will help him feel the adult's participation and concern and will help him fit new learnings into what he already knows.

Many toys enjoyed by sighted children may also be very much liked by the visually impaired child, though perhaps for different reasons. During the first year or so, this fact can be especially reassuring to the parents of a visually impaired boy or girl. Purchasing toys similar to those that friends are buying for their children can help such parents see the child-ness in their infant, and can help them place the impairment within the whole picture. It is important that parents not be immobilized by the fear that the "wrong kind" of toy will get into their youngster's hands; rather, they need to be helped in understanding, when their child uses something in a "different way," what his purposes and pleasures may be in doing so. Certainly educational materials should be thoughtfully chosen for the particular child, but adults can be helped to develop skill in making toy selections. When appropriate guidelines are understood and used, the responsibility will seem less terrifying.

The educational materials groupings in the list which follows

are roughly in order according to the degree of difficulty of the task involved (in terms of attention demanded, muscle use, eye/ear/hand coordination, etc.) There will be, however, much overlap both in terms of interest and ability when the individual child is concerned. Within each category one should think in terms of moving from the simplest, easiest and most gross materials to the more difficult or refined. We must be well aware that this is not a list in a literal sense of progression. For example, "books" in terms of the child's reading them himself would require an advanced level of functioning. In terms of the child's developing interest in books read to him by others, however, it is obvious that a much more elementary functioning level is required. Such materials as dolls may be pleasing and entertaining to a very young child because of certain qualities of form, size, texture, etc., but only later evoke interest as representatives of real-life counterparts.

Developmental Educational Materials for the Visually Impaired Child

- crib toys to look at, to sound, to feel, to smell
- to encourage head control and sitting
- to encourage two hands together at the midline of the body, grasping in an increasingly refined way
- for teething
- to feel through grasping, to enjoy through holding, to explore tactually
- to cause to sound, to make different things happen
- to encourage reaching and mobility through creeping, standing, walking
- to sit on, ride on, move on in gross ways
- to develop some thumb-finger working together
- to carry, to allow putting in and taking out (objects of different weights, textures, sounds, sizes and shapes)
- to encourage different kinds of direction following with bodily movement (i.e., records, singing games, etc.)
- such as clay, mud, sand, finger paints, water—to pour, spread, squeeze, roll, shape, smell, feel
- with movable parts that come apart and can be put back together, that screw and unscrew
- relative to "playing pretend" (for example, dressing up or playing house)
- to put in order, by one dimension or another
- with parts that have to be discriminated, matched (especially by shape, size, texture, weight, position, color); judged to be alike or different; counted
- to build with (blocks, tools, construction sets)
- to get meaning from because of their miniature-sized liknesses to real objects (dolls, cars)
- materials like scissors, paste, crayons, paints
- books and other materials directly related to reading

Obtaining Educational Materials

Much of the educational materials produced for sighted

youngsters can be used effectively by visually impaired boys and girls. It is not possible to evaluate and endorse products or to list all the organizations and companies providing good ones. The following list, however, includes companies which devote much effort to the young child. Their catalogs, usually provided on request, offer large selections from which apt choices of safe, desirable and economical items can be made.

Many of the companies named supply records for young children which are quite appropriate for youngsters with visual impairments, as well as for sighted children. A number of the major record firms have a line for young people (i.e. Capitol, Columbia, Decca, Folkways, R.C.A. Victor). When records, radio or television are used in a purposeful and selective way rather than as pacifiers for long periods of time they can foster learning and stimulate new interests and activities.

The world of young children's books is a crowded one. It contains a wide variety in terms of subject, size, illustrations, vocabulary, purpose, etc. Selection of books for a given child must be done in terms of his individual needs, as would be true with sighted children. The child with even a little vision can enjoy colors on a page, perhaps even shapes, when these are pointed out to him as he is read to. The youngster who sees better still will be able to appreciate more of a picture, more of the details, if these are shown to him again and again. Most of the books for these youngsters should be chosen for qualities which encourage the child's participation. Of course, some of these materials will be chosen for their auditory and meaning aspects, chiefly. For the youngster with no vision, the home-made books discussed earlier are particularly applicable. They will interest all children, however. Certain organizations, such as The Vision Center and The Christian Record Braille Foundation, Inc., are making available for the young child books with print and braille side-by-side. Though in many cases the vocabulary is such that even beginning reading cannot be managed, the very fact that a book contains words in his **own** medium makes it more interesting to the severely visually impaired child. Above all else, it is important that the young child be read to, over and over, and thus early get the feel for all the many values and pleasures of reading.

Sources of General Educational Materials for Young Children:

Allied Educational Council
P.O. Box 78
Galien, Michigan 49113

American Guidance Service, Inc.
Publishers' Building
Circle Pines, Minnesota 55014

Childcraft Equipment Company, Inc.
(Abbatt Developmental Toys Catalog, also)
155 East 23rd Street
New York, New York 10010

Christian Record Braille Foundation, Inc.
4444 South 52nd Street
Lincoln, Nebraska 68506

Community Playthings
Rifton, New York 12471

Constructive Playthings
1040 East 85th Street
Kansas City, Missouri 64131

David C. Cook Publishing Company
School Products Division
850 North Grove Avenue
Elgin, Illinois 60120

Creative Playthings, Inc.
Educational Department
Princeton, New Jersey 08540

A. Daigger and Company, Inc.
Educational Teaching Aids Division
159 West Kinzie Street
Chicago, Illinois 60610

Developmental Learning Materials
3505 North Ashland Avenue
Chicago, Illinois 60657

Dick Blick
Box 1267
Galesburg, Illinois 61401

Educational Research Associates, Inc.
P.O. Box 6604
Philadelphia, Pennsylvania 19149

Electronic Futures, Inc.
57 Dodge Avenue
North Haven, Connecticut 06473

Fisher-Price Toys, Inc.
East Aurora, New York 14052

Follett Publishing Company
1010 West Washington Boulevard
Chicago, Illinois 60607

General Learning Corporation
3 East 54th Street
New York, New York 10022

Howe Press (of)
Perkins School for the Blind
Watertown, Massachusetts 02172

Ideal School Supply Company
Oak Lawn, Illinois 60453

Instructo Corporation
Paoli, Pennsylvania 19301

The Lighthouse Low Vision Services
The New York Association for the Blind
111 East 59th Street
New York, N.Y. 10022

Lyndoncraft Educational Equipment
P.O. Box 12
Rosemead, California 91770

Monsanto
800 North Lindbergh Boulevard
St. Louis, Missouri 63166

Nifty Division, St. Regis Paper Company
2110 Fifth Avenue, South
Birmingham, Alabama 35233

Playskool, Inc. (division of Milton Bradley Company)
3720 North Kedzie Avenue
Chicago, Illinois 60618

Responsive Environments Corporation
Learning Materials Division
Englewood Cliffs, New Jersey 07632

F. A. O. Schwarz
Children's World
745 Fifth Avenue
New York, New York 10022

Sifo Company
834 North Seventh Street
Minneapolis, Minnesota 55411

Stein Enterprises
21027 - 61st Street, West
Lynnwood, Washington 98036

Tactile Aids for the Blind, Inc.
2625 Forest Avenue
Des Moines, Iowa 50311

Teaching Resources (of)
The New York Times
100 Boylston Street
Boston, Massachusetts 02116

Touch Aids
1790 South Juniper Street
Escondido, California 92025

Touch, Inc.
P.O. Box 1711
Albany, New York 12201

Tupperware Home Parties
Orlando, Florida 32802

Vision Center
1393 North High Street
Columbus, Ohio 43201

Organizations and Programs Whose Services Pertain to the Young Visually Impaired Child

(These are not intended to be comprehensive listings. Those desiring information pertinent to local concerns may obtain it by writing to the addresses given below.)

Those Concerned With Young Children Generally:

Association for Childhood Education International
3615 Wisconsin Avenue, N.W.
Washington, D.C. 20016

This association is intended for professional persons, interested in children from the nursery educational level through junior high school. It publishes a bimonthly journal, books for children, and materials regarding young children. It has local, sectional and annual meetings which are open to interested participants.

Elementary Kindergarten Nursery Education (EK/NE), Committee of
National Education Association
1201 Sixteenth Street, N.W.
Washington, D.C. 20036

This is a recently-begun committee intended for professional persons interested in children from the nursery education level through grade six. It is making available pertinent publications.

National Association for the Education of Young Children
1629 21st Street, N.W.
Washington, D.C. 20009

This association is intended for professional persons interested in the pre-school child. It publishes a quarterly journal entitled **Young Children** as well as other related materials. Its annual national and regional conferences are open to interested parties.

Parent Cooperative Preschools International
Whiteside-Taylor Centre for Cooperative Education
20551 Lakeshore Road
Baie D'urfe
Quebec, Canada

A cooperative intended for parents and professional persons, this group holds an annual meeting and there are periodic regional meetings within its five districts. Its publications include **Offspring,** a semi-yearly magazine and **The Parental Cooperative,** a semi-yearly newsletter.

Southern Association for Children Under Six
1070 Moss Avenue, N.E.
Orangeburg, South Carolina 29115

With a district organization in each of thirteen southern states, SACUS opens its membership to all who are interested in the young child. There are local and regional meetings and some pertinent publications.

United States Committee for Early Childhood Education
27 Gramercy Park
New York, New York 10011

This professional group is particularly interested in international pre-school education. It provides periodic pertinent newsletters sent to its membership by the President of the United States and conducts a world conference every three years or so.

Those Concerned With Young Visually Impaired Children, Particularly (in some cases, multiple-impaired):

American Foundation for the Blind, Inc.
15 West 16th Street
New York, New York 10011

This national organization serves as a clearing house on all information pertinent to blindness and blind persons, both children and adults. The Foundation is interested in research and legislation and offers consultative help to agencies. It has a special library regarding blindness and manufactures for the visually handicapped.

American Printing House for the Blind, Inc.
1839 Frankfort Avenue
Louisville, Kentucky 40206

APH supplies blind children, grades one through twelve, in the United States with educational materials, publishing books, magazines and related materials in several media. It manufactures educational aids, and conducts an annual census of blind students. The American Printing House engages in research and makes available lists of resources pertinent to the education of blind children.

Association for the Education of the Visually Handicapped
1604 Spruce Street
Philadelphia, Pennsylvania 19103

This association is intended for parents and professional persons, publishes a journal, **Education of the Visually Handicapped,** four times yearly and a newsletter, **Fountainhead,** five times yearly. Its conferences are held biennially.

Association of the Junior Leagues of America, Inc.
c/o Waldorf - Astoria
301 Park Avenue
New York, New York 10022

A number of Junior Leagues working with local organizations serving blind persons cooperate with educational and informational projects aimed at prevention of blindness.

Christian Record Braille Foundation, Inc.
4444 South 52nd Street
Lincoln, Nebraska 68506

This foundation serves persons throughout the world, supplying blind parents of preschool sighted children, as well as libraries and institutions with Full Vision Books, at no charge.

Delta Gamma Foundation
3250 Riverside Drive
Columbus, Ohio 43221

This chapter membership fraternity conducts the Delta Gamma projects on Sight Conservation and Aid to the Blind, encourages local community service by members and fosters programs at the local level based on indigenous needs.

Division for the Visually Handicapped: Partially Seeing
and Blind
Council for Exceptional Children (CEC)
Jefferson Plaza, Suite 900
1499 Jefferson Davis Highway
Arlington, Virginia 22202

This professional organization has local chapters in the United States and Canada. The overall CEC organization publishes ADVH Newsletter, journals, monographs, other papers and sponsors annual international conferences as well as local meetings. The CEC Information Center on Exceptional Children (CEC-ERIC) acts as a referral center for information requests in the areas of special education and child health.

Lions International
209 North Michigan Avenue
Chicago, Illinois 60601

The business and professional men in this international association have a major service interest in blind persons and blindness.

National Society for the Prevention of Blindness
79 Madison Avenue
New York, New York 10016

The Society serves the United States through state divisions. It supports research and studies regarding eye diseases and blindness and is interested in prevention and detection of preschoolers' vision problems and medical, educational and safety programs for persons of all ages.

New York Commission for the Blind
and Visually Handicapped
1450 Western Avenue
Albany, New York 12203

Although this commission serves New York State, its booklets are available for purchase and are pertinent to all visually impaired children.

Telephone Pioneers of America
Supervisor, Community Service Activities
195 Broadway
New York, New York 10007

This organization has local chapters throughout both the United States and Canada. Its members are active and retired employees of Telephone Industries. Its local chapters' concerns are varied but some are related to the needs of pre-school youngsters with visual impairments.

Federal and State Agencies and Services

Departments of education, health, mental health and welfare have general information to give and general services to offer through both federal and state structures. They have information and materials to give and are in the position to make referral to other agencies where preschool visually handicapped youngsters are helped.

Every state has a department of education within its general structure. In many cases, there are divisions of special education. Whatever the terms employed or the systems used, visually impaired children are a vital concern. Questions pertaining to educational programs for young visually impaired children should be directed, while the youngsters are still small (age three or earlier), to the appropriate state office.

Services for young children is one of the concerns of state departments involved with health, mental health and child

welfare. Where special needs are evident, appropriate referrals are made.

The Federal programs specified are concerned with children generally. They are within the United States Department of Health, Education and Welfare. The first two are interested in every aspect pertaining to youngsters: research, publications of numerous kinds, dissemination of other information and materials, direct services to state programs, the setting and maintaining of standards, conferences, etc. The third is concerned with literature regarding young children.

Social and Rehabilitation Service
Children's Bureau
330 C Street, S.W.
Washington, D.C. 20201

Office of Education
Bureau of Education for the Handicapped
7th and D Street, S. W.
Washington, D.C. 20202

National Laboratory on Early Childhood Education
National Coordinating Center
University of Illinois
805 West Pennsylvania Avenue
Urbana, Illinois 61801

A. CHILD DEVELOPMENT: INTELLIGENCE

Ayrault, E. W. **You can raise your handicapped child.** New York: Putnam's Sons, 1964.

Bloom, B. S. **Stability and change in human characteristics.** New York: Wiley, 1964.

Boyer, W. H., & Walsh, P. Are children born unequal? **Saturday Review**, 1968, 51(42), 61-63, 77-79.

Brody, S. The developing infant. **Children**, 1966, 13, 158-160.

Bruner, J. S., Olver, R. R., & Greenfield, P. M. **Studies in cognitive growth.** New York: Wiley, 1966.

Caldwell, B. What is the optimal learning environment for the young child? **American Journal of Orthopsychiatry**, 1967, 37, 8-21.

Cass, J. A non-professional looks at early childhood education. **Journal of Learning Disabilities**, 1968, 1(6), 36-43.

Children's Bureau. **Your child one to six.** New York: Child Care Publishers, 1962.

Dinkmeyer, D. C. **Child development: The emerging self.** Englewood Cliffs, N. J.: Prentice-Hall, 1965.

Fraiberg, S. **The magic years.** New York: Scribner's Sons, 1959.

Gessell, A., & Amatruda, C. S. **Developmental diagnosis.** New York: Hoeber Medical Division, Harper and Row, 1965.

Gesell, A., Halverson, H. M., Thompson, H., Ilg, F. L., Castner, B. M., Ames, L. B., & Amatruda, C. S. **The first five years of life.** New York: Harper, 1940.

Getzels, J. W., & Elkins, K. Perceptual and cognitive development. **Review of Educational Research**, 1964, 34, 559-573.

Haynes, U. A **developmental approach to casefinding.** Washington, D. C.: USGPO, 1967. (Children's Bureau Pub. No. 449-1967)

Hellmuth, J. (Ed.) **Exceptional infant.** Vol. I. **The normal infant.** Seattle, Wash.: Special Child Publications of the Seguin School, 1967.

Hoffman, M. L., & Hoffman, L. W. **Review of child development research.** New York: Russell Sage Foundation, 1964.

Hunt, J. M. **Intelligence and experience.** New York: Ronald Press, 1961.

Hunt, J. M., & Uzgiris, I. **Toward ordinal scales of infant development.** In press (contact University of Illinois).

Illingworth, R. S. **The development of the infant and young child, normal and abnormal.** Baltimore, Md.: Williams and Wilkins, 1966.

Kagan, J. The child: His struggle for identity. **Saturday Review**, 1968, 51(49), 80-82, 87-88.

Kirk, S. A., Karnes, M. B., & Kirk, W. **You and your retarded child.** Palo Alto, Calif.: Pacific Books, 1968.

Lowenfeld, V. **Creative and mental growth.** New York: Macmillian, 1959.

Maier, H. W. **Three theories of child development.** New York: Harper and Row, 1965.

Murphy, L. B. Issues in research. **Children**, 1969, 16, 46-52.

Mussen, P. H., Conger, J. J., & Kagan, J. **Child development**

and personality. New York: Harper and Row, 1963.

Ross, A. **The exceptional child in the family.** New York: Grune and Stratton, 1964.

Smart, M. S., & Smart, R. C. **Children – Development and relationships.** New York: Macmillian, 1967.

Spock, B., & Lerrigo, M. O. **Caring for your disabled child.** New York: Macmillian, 1965.

Watson, E. H., & Lowrey, G. H. **Growth and development of children.** Chicago: Year Book Medical Publishers, 1962.

Witmer, H. L. (Ed.) **On rearing infants and young children in institutions.** Washington, D. C.: USGPO, 1967. (Children's Bureau Research Reports, No. 1)

B. EARLY CHILDHOOD EDUCATION

Ashton-Warner, S. **Teacher.** New York: Simon and Schuster, 1963.

Bereiter, C., & Engelmann, S. **Teaching disadvantaged children in the preschool.** Englewood Cliffs, N. J.: Prentice-Hall, 1966.

Blank, M. A methodology for fostering abstract thinking in deprived children. Presented at conference, "Problems in the Teaching of Young Children", Toronto, Ontario, March 1968.

Bricker, W. A., & Larsen, L. A. **A manual for parents and teachers of severely and moderately retarded children.** Nashville, Tenn.: George Peabody College for Teachers, 1968. [IMRID Papers and Reports, 1968, 5(No. 22)]

Caldwell, B. M. **Project Head Start daily program II.** Washington, D. C.: Office of Economic Opportunity (Project Head Start), not dated.

Cazden, C. B. Some implications of research on language development for pre-school education. In R. D. Hess, & R. M. Bear (Eds.), **Early education.** Chicago: Aldine, 1968. Pp. 131-142.

Cratty, B. J. **Developmental sequence of perceptual-motor tasks.** Freeport, Long Island, N. Y.: Educational Activities, 1967.

Frost, J. L. (Ed.) **Early childhood education rediscovered.** New York: Holt, Rinehart and Winston, 1968.

Gordon, I., & Lally, J. R. **Intellectual stimulation for infants and toddlers.** Gainesville, Fla.: Institute for Development of Human Resources, College of Education, University of Florida, 1968.

Gray, S. W., Klaus, R. A., Miller, J. O., & Forrester, B. J. **Before first grade.** New York: Teachers College, Columbia University, 1966.

Hechinger, F. (Ed.) **Preschool education today.** New York: Doubleday, 1966.

Ilg, F. L., & Ames, L. B. **School readiness: Tests in use at the Gesell Institute.** New York: Harper and Row, 1965.

John Tracy Clinic, **John Tracy Clinic correspondence course for parents of preschool deaf children.** Los Angeles, Calif.: John Tracy Clinic, 1968.

Karnes, M. **Helping young children develop language skills: A book of activities.** Washington, D. C.: Council for Exceptional Children, 1968.

Kephart, N. C. **The slow learner in the classroom.** Columbus, O.: Merrill, 1960.

Krech, D. The chemistry of learning. **Saturday Review,** 1968, 51(3) 48-50, 68.

Krown, S. Preschool programs for disadvantaged children. **Children,** 1968, 15, 236-239.

LaVor, M. The Handicapped Children's Early Education Assistance Act Public Law 90-538. **Exceptional Children,** 1969, 35, 379-383.

Louisville Public Schools, Division of Curriculum, **A developmental approach to learning for young children.** Louisville, Ky.: Author, 1966.

Mackintosh, H. K., Gore, L., & Lewis, G. M. **Educating disadvantaged children in the primary years.** Washington, D. C.: U. S. Office of Education, 1965.

Moore, O. K. **Autotelic responsive environments and exceptional children.** Seattle, Wash.: Special Child Publications of the Seguin School, 1964.

Nimnicht, G., McAfee, O., & Meier, J. **The new nursery school.** New York: General Learning Corporation, 1969.

Orem, R. C. (Ed.) **Montessori for the disadvantaged.** New York: Putnam's Sons, 1967.

Palmer, F. H. Concept training curriculum for children aged two to three years and eight months. New York: Institute for Child Development and Experimental Education of the City University of New York, 1968. (Supported by Grant No. HD02253, NICHD)

Patterson, G. R., & Gullion, M. E. **Living with children** - New methods for parents and teachers. Champaign, Ill.: Research Press, 1968.

Pines, M. **Revolution in learning.** New York: Harper and Row, 1967.

Schaefer, E. S. Intellectual stimulation of culturally-deprived infants. Progress report, July 1968, regarding Mental Health Grant Proposal No. MH-09224-01. Laboratory of Psychology, NIMH.

Senn, M. J. E. Early childhood education - for what goals? **Children,** 1969, 16, 8-13.

Simpson, D. **Learning to learn.** Columbus, O.: Merrill, 1968.

Tannenbaum, A. J. (Ed.) **Special education and programs for disadvantaged children and youth.** Washington, D. C.: Council for Exceptional Children, 1968.

Weikart, D. P. Preschool programs: Preliminary findings. **Journal of Special Education,** 1967, 1, 163-181.

Wittes, G., & Radin, N. **Helping your child to learn: The reinforcement approach.** San Rafael, Calif.: Dimensions Publishing Co., 1969.

C. EDUCATIONAL MATERIALS

Alpha Chi Omega. **Alpha Chi Omega toy book.** Indianapolis, Ind.: Author, 1967.

Dorward, B. **Teaching aids and toys for handicapped children.** Washington, D. C.: Council for Exceptional Children, 1960.

Frantzen, J. **Toys . . . the tools of children.** Chicago: National Eastern Seal Society for Children and Adults, 1957.

Kassirer, E. **What's what for children.** Ottawa, Can.: Beauregard Press, 1967.

Langdon, G. **Your child's play.** Chicago: National Easter Seal Society for Children and Adults, 1957.

Levine, S. J. **Empirical study of instructional material evaluation in special education.** East Lansing, Mich.: U. S. Office of Education/Michigan State University Regional Instructional Materials Center for Handicapped Children and Youth, 1969. (No. 3)

Patterson, R. M. (Ed.) **Teaching devices for children with impaired learning.** Columbus, O.: Parents Volunteer Association of the Columbus State School, 1958.

Sunderlin, S. (Ed.) **Equipment and supplies tested and approved for preschool/school/home.** Washington, D. C.: Association for Childhood Education International, 1968.

D. CHILD GROWTH: SELF CONCEPT

Axline, V. **Dibs - In Search of self.** Boston: Houghton Mifflin, 1964.

Ginott, H. **Between parent and child.** New York: Macmillian, 1965.

Holt, J. **How children fail.** New York: Pitman, 1964.

Jersild, A. T. **In search of self.** New York: Teachers College, Columbia University, 1952.

Jourard, S. M. **The transparent self.** Princeton, N. J.: Van Nostrand, 1964.

Maslow, A. H. **Toward a psychology of being.** Princeton, N. J.: Van Nostrand, 1962.

May, R. **Man's search for himself.** New York: Norton, 1953.

Wright, B. **Physical disability; a psychological approach.** New York: Harper, 1960.

E. VISION AND PERCEPTION

Costenbader, F. D., & O'Neill, J. F. Ocular examination before the age of four years. **Sight-Saving Review,** 1968, 38, 135-140.

Gibson, J. J. **The senses considered as perceptual systems.** Boston: Houghton Mifflin, 1966.

Oberman, J. J. Vision needs of America's children. **Sight-Saving Review,** 1966, 36, 217-226.

Savitz, R. A., Reed, R. E., & Valadian, I. **Vision screening of the preschool child.** Washington, D. C.: USGPO, 1964. (Children's Bureau Pub. No. 414-1964)

Trotter, R. R., Phillips, R. M., & Shaffer, K. Measurement of visual acuity of preschool children by their parents. **Sight-Saving Review,** 1966, 36, 80-87.

Vernon, M. D. **The psychology of perception.** Baltimore, Md.: Penguin Books, 1962.

F. BIBLIOGRAPHIES

Council for Exceptional Children Information Center on Exceptional Children. **Preschool education.** Washington, D. C.: Council for Exceptional Children, 1968. (Exceptional Children Bibliography Series)

New York University, School of Education, Institute for Developmental Studies, **Selected bibliography.** New York: Author, 1968.

United States National Committee on Early Childhood Education. **Bibliography.** Professional books selected and exhibited at the XII OMEP World Assembly, Washington, D. C., July 31-August 7, 1968.

Wolinsky, G. F. **The preschool multiple handicapped - A selected bibliography.** Albany, N. Y.: Network of Special Education Instructional Materials Centers, the University of the State of New York - State Education Department, Division for Handicapped Children, 1969.

G. VISUALLY IMPAIRED CHILDREN: GENERAL REFERENCES

The following are coded according to the preceding categories, A, B, C, D, E & F.

Abel, G. L. Concerning the Education of blind children. **American Foundation for the Blind, Educational Series,** 1959, No. 12. (B)

American Foundation for the Blind. **Proceedings of the west coast regional conference on research related to blind and severely visually impaired children.** New York: Author, 1965. (A. H. Parmelee, others) (General)

American Foundation for the Blind. **Index of publications issued by International Research Information Service through 1968.** New York: Author, 1968. (F)

American Foundation for the Blind. **Directory of agencies serving the visually handicapped in the United States.** New York: Author, 1969. (a) (General)

American Foundation for the Blind. **Proceedings of the National Seminar on Services to Young Children with Visual Impairment.** New York: Author, 1969. (b) (A, B, D, E)

Ashcroft, S. C. Blind and partially seeing children. In L. M. Dunn (Ed.), **Exceptional children in the schools.** New York: Holt, Rinehart, and Winston, 1963. Pp. 413-461. (B)

Ashcroft, S. C. Delineating the possible for the multi-handicapped child with visual impairment. **Sight-Saving Review,** 1966, 36, 90-94. (A, B)

Ashcroft, S. C., Halliday, C., & Barraga, N. **Study II: Effects of experimental teaching on the visual behavior of children educated as though they had no vision.** Nashville, Tenn.: George Peabody College for Teachers, 1965. (Office of Education Grant No. 32-52-0120-1034) (A, B, C, E)

Barraga, N. Increased visual behavior in low vision children. **American Foundation for the Blind, Research Series,** 1964, No. 13. (A, B, C, E)

Bauman, M. K., & Yoder, N. M. **Adjustment to blindness, reviewed.** Springfield, Ill.: Thomas, 1966. (General)

Bluhm, D. **Teaching the retarded visually handicapped.** Philadelphia, Pa.: Saunders, 1968. (B, C)

Brodey, W. Sound and space. **New Outlook for the Blind,** 1965, 59, 1-4. (E).

Burlingham, D. Developmental considerations in the occupations of the blind. In R. S. Eissler (Ed.), **The psychoanalytic study of the child.** New York: International Universities Press, 1967. Pp. 187-198. (A, B, C)

Clark, L. L. (Ed.) **Proceedings of the International Congress on Technology and Blindness, Vol. II. Panel II - Living systems.** New York: American Foundation for the Blind, 1963. (General)

Clark, L. L. The expression of emotion by the blind. **New Outlook for the Blind,** 1967, 61, 155-163. (a) (A, E)

Clark, L. L. The expression of emotion by the blind. **New Outlook for the Blind,** 1967, 61, 194-204. (b) (A, E)

Cohen, J. The effects of blindness on children's development. **New Outlook for the Blind,** 1966, 60, 150-154. (A, D, E)

Coyne, P. H., Peterson, L. W., & Peterson, R. F. The development of spoon-feeding behaviors in a blind child. **International Journal for the Education of the Blind,** 1968, 18, 108-112. (A, B)

Cratty, B., & Sams, T. A. **Body-image of blind children.** New York: American Foundation for the Blind, 1968. (A, B, D, E)

Cratty, B. J., Peterson, C., Harris, J., & Schoner, R. The development of perceptual-motor abilities in blind children and adolescents. **New Outlook for the Blind,** 1968, 62, 111-117. (A, B, E)

Curriculum guide: **Pre-cane mobility and orientation skills for the blind.** Lansing, Mich.: Michigan School for the Blind. (B, E)

Davis, C. J. Development of the self-concept. **New Outlook for the Blind,** 1964, 58, 49-51. (A, D)

DeAngelis, G. J. The siminar series: A strategy for acquainting professional workers with the problems of the blind. **New Outlook for the Blind,** 1969, 63, 97-102. (D)

Dokecki, P. R. Verbalism and the blind: A critical review of the concept and the literature. **Exceptional Children,** 1966, 32, 525-530. (B, E)

Dorward, B., & Barraga, N. **Teaching aids for blind and visually limited children.** New York: American Foundation for the Blind, 1968. (A, B, C, E)

Eichorn, J. R., & Vigaroso, H. R. Orientation and mobility for pre-school blind children. **International Journal for the Education of the Blind,** 1967, 17, 48-50. (A, B, E)

Foulke, E. Non-visual communication. **International Journal**

for the Education of the Blind, 1968, 18, 77-78. (B, D, E)

Fraiberg, S. Parallel and divergent patterns in blind and sighted infants. In R. S. Eissler (Ed.), **The psychoanalytic study of the child.** New York: International Universities Press, 1968. Pp. 264-300. (A, D, E)

Fraiberg, S., & Freedman, D. A. Studies in the ego development of the congenitally blind child. In R. S. Eissler (Ed.), **The psychoanalytic study of the child.** New York: International Universities Press, 1964, Pp. 113-169. (A, D, E)

Fraiberg, S., Smith, M., & Adelson, E. An educational program for blind infants. **Journal of Special Education,** 1969, 3, 121-139. (A, B, C, D, E)

Goldberg, M. H., & Swinton, J. R. (Eds.) **Blindness research: The expanding frontiers.** University Park, Pa.: Pennsylvania State University Press, 1969. (General)

Groves, D., & Griffith, C. **Guiding the development of the young visually handicapped: A selected list of activities.** Columbus, O.: State School for the Blind, 1968. (A, B, C, E)

Hapeman, L. B. Developmental concepts of blind children between the ages of three and six as they relate to orientation and mobility. **International Journal for the Education of the Blind,** 1967, 17, 41-48. (A, B, E)

Harley, R. K. Verbalisms among blind children. **American Foundation for the Blind, Research Series,** 1963, No. 10. (B, E)

Imamura, S. Mother and blind child. **American Foundation for the Blind, Research Series,** 1965, No. 14, (A, D, E)

Jernigan, K. Blindness: Handicap or characteristic? **New Outlook for the Blind,** 1965, 59, 244-249. (B, D)

Jervis, F. M. The self in process of obtaining and maintaining self-esteem. **New Outlook for the Blind,** 1964, 58, 51-54. (B, D)

Jones, J. W. Problems in defining and classifying blindness. **American Foundation for the Blind, Research Bulletin,** 1963, No. 3, 123-129. (B, E)

Jones, J. W. **The visually handicapped child at home and school.** Washington, D. C.: USGPO, 1968. (OE 35045-68) (General)

Juurmaa, J. The ability structure of the blind and the deaf: Final report. **American Foundation for the Blind, Research Bulletin,** 1967, No. 14, 109-121. (A, B, E)

Kurzhals, I. W. Reading made meaningful through a readiness for learning program. **International Journal for the Education of the Blind,** 1966, 15, 107-111. (B, C, D, E)

Kurzhals, I. W. Fashioning learning opportunities for the child with impaired vision. **New Outlook for the Blind,** 1968, 62, 160-166. (a) (A, B, D, E)

Kurzhals, I. W. What is "readiness" for the blind child? **International Journal for the Education of the Blind,** 1968, 18, 90-93. (b) (A, B)

Lairy, G. C. Problems in the adjustment of the visually impaired child. **New Outlook for the Blind,** 1969, 63, 33-41. (A, B, E)

Land, S. L., & Vineberg, S. E. Locus of control in blind children. **Exceptional Children,** 1965, 31, 257-260. (B, D)

Lord, F. E. Preliminary standarization of a scale of orientation and mobility skills of young blind children: Final report. Los Angeles, Calif.: California State College, 1967. (Grant No. OEG-4-7-062464, Project No. 6-2464) (A, B, D, E)

Lowenfeld, B. **Our blind children.** Springfield, Ill.: Thomas, 1969. (A, B, D)

Lowenfeld, B., Abel, G. L., & Hatlen, P. H. **Blind children**

learn to read. Springfield, Ill.: Thomas, 1969. (A, B, C, E)

Maxfield, K. E., & Buchholz, S. A social maturity scale for blind preschool children. New York: American Foundation for the Blind, 1957. (A, B)

Moor, P. No time to lose. (A symposium) New York: American Foundation for the Blind, 1968. (A, B, C, D)

Morse, J. L. Mannerisms, not blindisms: Causation and treatment. International Journal for the Education of the Blind, 1965, 15, 12-16. (B, D, E)

Murray, V. Hints for parents of pre-school visually handicapped children. Philadelphia, Pa.: Association for Education of the Visually Handicapped, not dated. (A, B, C, D)

Murray, V. Play and playthings for blind children. International Journal for the Education of the Blind, 1965, 15, 17-20. (A, B, C, D)

New York State Department of Social Welfare, Commission for the Blind. A guide for parents of a preschool blind child. New York: Author, not dated. (A, B)

Nolan, C. Y. A 1966 reappraisal of the relationship between visual acuity and mode of reading for blind children. New Outlook for the Blind, 1967, 61, 255-261. (B, E)

Nolan, C. Y., & Ashcroft, S. C. The visually handicapped. Review of Educational Research, 1969, 39, 52-70. (General)

Nolan, C. Y., & Morris, J. E. Variability among young blind children in object recognition. International Journal for the Education of the Blind, 1960, 10, 23-25. (B)

Nolan, C. Y., & Morris, J. E. Development and validation of the Roughness Discrimination Test. International Journal for the Education of the Blind, 1965, 15, 1-6. (B, E)

Nolan, C. Y., & Morris, J. E. Bibliography of research on the visually handicapped. Louisville, Ky.: American Printing House for the Blind, 1967. (F)

Norris, M., Spaulding, P. J., & Brodie, F. H. Blindness in children. Chicago: University of Chicago, 1957. (A, B, D, E)

Parmelee, A. H. Developmental studies of blind children: I. New Outlook for the Blind, 1966, 60, 177-179. (A, E)

Perkins School for the Blind Research Library. The Perkins research library annual accessions. Watertown, Mass.: Perkins School for the Blind. (F)

Pittam, V. G. Reading readiness. New Outlook for the Blind, 1965, 59, 322-324. (B)

Rex, E., & Calovini, G. Learning through illustrations. Teaching Exceptional Children, 1968, 1, 14-20. (A, B, C, E)

Root, F. K. Evaluation of services for multiple-handicapped blind children. International Journal for the Education of the Blind, 1963, 13, 33-38. (A, B)

Rubin, E. J. Abstract functioning in the blind. American Foundation for the Blind, Research Series, 1964, No. 11. (A, B, D, E)

Scott, E. P. The education of the young child who is visually impaired. DVH Newsletter, 1968, 14(2), 10-13. (A, B)

Spencer, M. Blind children in family and community. Minneapolis, Minn.: University of Minnesota Press, 1960. (A, B)

Toomer, J., & Brown, C. Notes for parents. Philadelphia, Pa.: Association for Education of the Visually Handicapped, not dated. (A, B, D, E)

United States Office of Education, Bureau of Education for the Handicapped. Policies and procedures - Centers and services for deaf-blind children - Elementary and

Secondary Education Act Title VI, Part C. Washington, D. C.: Author, 1969. (B)

University of the State of New York: The State Education Department, Bureau for Handicapped Children. **Adapting materials for educating blind children with sighted children.** Albany, N. Y.: Author, 1961. (B, C)

Wilkin, H. A., Birnbaum, J., Lomonaco, S., Lehr, S., & Herman, J. L. Cognitive patterning in congenitally totally blind children. **Child Development,** 1968, 39, 767-786. (A, D, E)

Wills, D. M. Some observations on blind nursery school children's understanding of their world. In R. S. Eissler (Ed.), **The psychoanalytic study of the child.** New York: International Universities Press, 1965. Pp. 344-363. (A, B, D, E)

Wolff, P. Developmental studies of blind children: II. **New Outlook for the Blind,** 1966, 60, 179-182. (A, D, E)

Zemtzova, M. I., Kulagin, J. A., & Novikova, L. A. The use of the remaining sensory channels (safe analyzers) in compensation of visual function in blindness. **American Foundation for the Blind, Research Bulletin,** 1962, No. 2, 72-87. (A, B, E)